

# *Lamar County Multi-Jurisdictional Hazard Mitigation Plan*

*Prepared for:*

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*Lamar County, Town of Sumrall, City of Purvis, and City of Lumberton*



*April 1, 2013  
Final*

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*Lamar County, Town of Sumrall, City of Purvis, City of Lumberton*

*Prepared by*

*Lamar County Hazard Mitigation Council, Lamar County Emergency  
Management Department, Lamar County Planning Department*

*Adopted*

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# Table of Contents

I.	Introduction and Purpose .....	1
II.	Plan Process, Updates, Planning Mechanisms, and Continued Public Involvement.....	1
	Plan Process.....	1
	Updates .....	3
	Planning Mechanisms .....	3
	Continued Public Involvement .....	4
III.	Topography, Climate, History and Current Conditions.....	5
	Natural Features .....	5
	Climate in Lamar County .....	6
	History of Lamar County.....	6
	Early Settlements .....	7
IV.	Vulnerability Analysis .....	7
	People.....	7
	Buildings and Infrastructure.....	8
	Critical Facilities .....	8
	Natural and Environmental Hazards.....	11
	Economy .....	11
V.	Hazards Identification.....	11
	Windstorms / Thunderstorms.....	12
	Flooding .....	14
	Tornadoes .....	17
	Hurricanes.....	20
	Dam Failure.....	20
	Wildfires .....	22
VI.	Risk Assessment.....	23
VII.	Preparedness.....	26
	Organization.....	26
	General .....	26
	Emergency Management Activities.....	26
	Community Education .....	27
	Television and Radio Stations .....	28
	Print News Media .....	28
	Other Sources.....	29
	Drainage System Maintenance .....	29
VIII.	Community Goals and Mitigation Actions .....	29
	Community Goals.....	29
	Community Mitigation Actions .....	30
	Goal 1.....	30
	Goal 2.....	31
	Goal 3.....	32
	Goal 4.....	35
	Goal 5.....	35
	Goal 6.....	36
	Goal 7.....	37
	Community Mitigation Projects .....	39
	Mitigation Actions and/or Projects Worksheet Lamar County.....	41

Mitigation Actions and/or Projects Worksheet Lamar County .....	42
Mitigation Actions and/or Projects Worksheet Lamar County .....	43
Mitigation Actions and/or Projects Worksheet Lamar County .....	44
Mitigation Actions and/or Projects Worksheet Lamar County .....	45
Mitigation Actions and/or Projects Worksheet Town of Sumrall.....	46
Mitigation Actions and/or Projects Worksheet Town of Sumrall.....	47
Mitigation Actions and/or Projects Worksheet Town of Sumrall.....	48
Mitigation Actions and/or Projects Worksheet City of Purvis .....	49
Mitigation Actions and/or Projects Worksheet City of Purvis .....	50
Mitigation Actions and/or Projects Worksheet City of Purvis .....	51
Mitigation Actions and/or Projects Worksheet City of Lumberton .....	52
Mitigation Actions and/or Projects Worksheet City of Lumberton .....	53
Mitigation Actions and/or Projects Worksheet City of Lumberton .....	54
Mitigation Actions and/or Projects Worksheet City of Lumberton .....	55
 Appendices.....	 56
<i>Appendix 1 Hazard Mitigation Council .....</i>	<i>57</i>
<i>Appendix 2 Benefit / Cost Review Supplement To Staple + E Worksheet .....</i>	<i>58</i>
<i>Appendix 3 Past Windstorms/Thunderstorm Events and Locations.....</i>	<i>59</i>
<i>Appendix 4 Lamar County Critical Facilities Map .....</i>	<i>69</i>
<i>Appendix 5 Lamar County High Hazard Dams.....</i>	<i>70</i>
<i>Appendix 6 Lamar County High Occurrence Wildfire Areas.....</i>	<i>71</i>
<i>Appendix 7 Mitigation Council Invitations.....</i>	<i>72</i>

## **I. Introduction and Purpose**

### **Introduction**

Lamar County is located in the southeastern part of the State of Mississippi; the county is almost a perfect rectangle, except for the northeast corner and slight irregularities on the southern boundary. The county contains 498 square miles, or 316,800 acres. The boundaries are as follows: On the north by Jefferson Davis, Covington, and Forrest Counties; on the east by Forrest County; on the south by Pearl River County and on the west by Marion County.

According to the U. S. Census Bureau, in the years between 1990 and 2000, the population of Lamar County increased from 30,424 to 39,070. Three municipalities, Lumberton with population of 2,228, Purvis with population of 2,164 and Sumrall with population of 1,005 are located in Lamar County. The remaining population resides in unincorporated communities and unincorporated rural areas. Lamar County is one of the fastest growing counties in the state.

According to the U. S. Census Bureau, in the years between 2000 and 2010, the population of Lamar County increased from 39,070 to 55,658. Three municipalities, Lumberton with population of 2,748, Purvis with population of 2,697 and Sumrall with population of 1,425 are located in Lamar County. The remaining population resides in unincorporated communities and unincorporated rural areas.

### **Purpose**

The purpose of the Lamar County Hazard Mitigation Plan is to improve the County's level of disaster preparedness and resilience to natural and manmade disasters. The county and cities, due to their location and topography, are subject to many types of hazards.

## **II. Plan Process, Updates, Planning Mechanisms, and Continued Public Involvement 201.6(a)(3), 201.6(b), 201.6(c)(1), 201.6(c)(4)(i), 01.6(c)(4)(ii), 201.6(c)(4)(iii)**

### **A. Plan Process**

#### **Step 1: Organize Resources**

The Lamar County Emergency Management Agency was the initiate department of the Hazard Mitigation Plan. After reviewing the criteria set forth in establishing the Plan, the decision was made to establish a Hazard Mitigation Council, and to involve the incorporated areas of the County to join in on the process and be part of the council.

In order to create a diverse and comprehensive council, contact was made via letters and telephone calls, to the City of Purvis, City of Lumberton, and the Town of Sumrall to make sure the jurisdictions were included with Unincorporated Lamar County as part of the Multi-Jurisdictional Plan. Invitations were also extended to many businesses and industries located within the county, local school officials, and to neighboring communities. It was determined that contractors would not be utilized to develop this plan. The full list can be found in Appendix 6.

Efforts were made to involve the public by placing an ad in the local newspaper which ran an article about the Hazard Mitigation Plan, what it meant to the community, that the meetings were open to the public, the date, time, and location of the first meeting. We also had the information running on our website for the month of February 2012.

## **Step 2: Assess Risks**

In the initial meeting, which took place on November 25, 2003, the Emergency Management Agency members discussed plan requirements and objectives with those attending. During the initial meeting, local hazard threats were discussed, the council members were named, and a subsequent meeting date was established. This was also the initial public hearing on the plan.

The Emergency Management Agency Director and staff took the roll of developing the plan. Two additional Council meetings were held on November 30, 2004, and December 8, 2005, in order to present the changes to the plan and to receive recommendations and corrections. Throughout the meetings, representatives of the cities offered input as to what information affecting their jurisdictions should be included. Members of the public, schools, business, and neighboring communities attended and will continue to attend subsequent meetings. The Council will continue to invite interested parties to planning meetings.

The Emergency Management Director and Administrative Assistant identified, profiled, and assessed the vulnerability of all potential hazards to the jurisdictions.

On May 24, 2011 the council members and others held a meeting to discuss the update to the Hazard Mitigation Plan, which is required every five years. Everyone participated by bring their completed, new, and continued Mitigation Actions and/or Projects to the table. The initial public hearing was set for February 24, 2012 to afford the public a chance to review the plan and be able to add any additional items or comments to plan. During this hearing, we discussed the potential changes that would need to be made and got many positive feedbacks. Once the draft plan has been approved, we will hold a second public hearing to afford the public a chance to review the changes that have been made.

## **Step 3: Develop the Mitigation Plan**

The Council developed mitigation goals in order to minimize damage and speed recovery. The Emergency Management Department documented the planning process in this plan. The Lamar County Planning Department worked on identifying funding sources for funding and assisted in the documentation of the plan. The other jurisdictions provided information regarding their goals and vulnerabilities to their specific jurisdiction they represented.

## **Step 4: Implement and Monitor Progress**

Before final approval of the plan by any of the participating jurisdictions, a final public hearing will be advertised in the paper by each jurisdiction. Each jurisdiction will then take all comments into consideration before accepting the final version of the Multi-Jurisdictional Hazard Mitigation Plan.

Detailed below is information such as updating, implementation, and continued public involvement.

## **B. Updates**

The Lamar County Planning Department will be the department responsible for monitoring, evaluating, and updating the plan.

The Planning Department will monitor the plan by calling meetings of the Hazard Mitigation Council which will be scheduled during the months of April and October and emergency meetings will be conducted following disaster events. The dates will be determined according to the availability of schedules. During these meetings, the Council, led by the Planning Department will request reports on the mitigation actions. In addition, the Planning department will periodically conduct phone calls to responsible jurisdiction personnel, and conduct inspections of mitigation action sites.

The Hazard Mitigation Council, led by the Planning Department, will evaluate the plan during the meeting held in April. At this meeting, the Council will discuss:

1. Mitigation Actions Progress
2. Continued feasibility of the actions
3. Funding sources and availability for each action item
4. Hazard Mitigation Plan goals, new mitigation actions, history of events, outreach, critical facilities, and vulnerabilities.

During the April meeting, the committee met and presented all of their items from the original plan that had either been completed or still in progress. The items that had been completed were then marked as such and all new items were brought to the table. The Committee also reviewed the changes in the U.S. Census Bureau, briefly, to discuss the growth of population in the area. After the evaluation in April, the Planning Department took the evaluations and determined that certain portions of the plan needed updating.

The update will take place following the April Council meetings at a minimum of every 5 years from the date that this plan was adopted, with the first update scheduled for May of 2011. We will cover a variety of items including but not limited to the following:

1. Changes in vulnerability due to action implementation
2. Documentation of success stories and failures where mitigations actions have been taken, as well as, any new or overlooked hazards that may arise.
3. Incorporate new data/studies on hazards and risks
4. Continued feasibility of Mitigation Actions along with availability of funding sources
5. Incorporate new Mitigation Actions or changes in the prioritization of actions

Once everything has been reviewed discussed and/or incorporated, we will hold a public hearing to reveal such changes to the public. Following the hearing we will , we will review all comments from the public and incorporate changes, as needed.

## **C. Planning Mechanisms**

The following chart shows the planning mechanisms that were considered and included in the development of this plan; also, the planning mechanisms the mitigation plan will be incorporated into:

Table 1

Jurisdiction	Comprehensive Emergency Plan	Capital Improvement Plan	Building Code	Flood Hazard Ordinance	Zoning Ordinance	Emergency Operations Plan
Unincorporated Lamar County	Yes	Yes	No	Yes	Yes	Yes
City of Purvis	Yes	No	Yes	Yes	Yes	Yes
City of Lumberton	Yes	No	Yes	Yes	Yes	Yes
Town of Sumrall	Yes	No	Yes	Yes	Yes	Yes

The plan also took into consideration Census data, population projections, Flood Insurance Rate Maps, National Weather Service data, and reports from the Lamar County Emergency Management Operations Center.

All Jurisdictions will review their planning mechanisms and incorporate the Multi-Hazard Mitigation Plan into existing planning mechanisms specific to the jurisdiction. Each jurisdiction routinely reviews and updates their plans, during that process the local legislative body will require the Multi-Hazard Mitigation Plan be incorporated into revised planning mechanisms, as needed, before allowing a public hearing and before a vote is taken to amend the mechanism that is under review.

During the last five years we have added the Lamar County Comprehensive Plan, as well as, the County Zoning Ordinance into our unincorporated areas of the community. During the drafting stages of these two plans, the Zoning and Comprehensive Plan Committee incorporated certain parts of the Multi-Jurisdictional Hazard Mitigation Plan into these ordinances, as needed. We also revised our Lamar County Flood Damage Prevention Ordinance, to include certain goals and objectives from the Multi-Jurisdictional Hazard Mitigation Plan. The City of Purvis, Town of Sumrall, and the City of Lumberton also revised their individual Flood Damage Prevention Ordinances to reflect the same types of changes. In addition, MEMA conducts a Community Assistance Visit with the Lamar County Floodplain Manager every two years to verify that Lamar County and all municipalities within are in compliance with NFIP.

We are currently working to update the Lamar County Subdivision Regulations and Site Plan Review Ordinance to incorporate this plan into them also. The County Engineer and Planning Department will be working together to make sure that recommendations for hazard mitigation requirements for infrastructure in subdivisions, both residential and commercial, are to be incorporated into the new regulations and ordinances.

Currently, the Emergency Management Director and team ,are working to incorporate the plan into the revision of the Emergency Operations Plan. As each jurisdiction works to revise or update their plans/ordinances/ regulations, they will all work to incorporate the mitigation plan in as needed.

#### **D. Continued Public Involvement**

To ensure continued public participation, public hearings will be held prior to any plan revisions. The multi-hazard mitigation plan will be posted on the county website with contact information provided for additional comments to be provided at any time. Dates,



times, and locations of Hazard Mitigation Council meetings will be posted on the website one month prior to the meeting, and published in the newspaper. The plan will be posted following the approval of the draft. The website is [www.lamarcounty.com](http://www.lamarcounty.com). Also, telephone and letter invitations will be made to neighboring communities, the local school boards, and key businesses located throughout the county and cities.

## **II. Topography, Climate, History and Current Conditions**

### **A. Natural Features**

Lamar County encompasses approximately 498 square miles or approximately 316,800 acres in the southeastern portion of the State of Mississippi. The boundaries are as follows: On the north by Jefferson Davis, Covington, and Forrest Counties; on the east by Forrest and Pearl River Counties; on the south by Pearl River County and on the west by Pearl River and Marion Counties. Purvis, the county seat, is located approximately 100 miles south of Jackson, Mississippi and approximately 100 miles north of New Orleans, Louisiana.

Lamar County lies within the Gulf Coastal plain province and in the Long Leaf Pine region in Mississippi, locally called the "Piney Woods" country. The upland soils of the county are derived from two main classes of coastal plain materials: beds of sandy clay and beds of heavy clay.

The highest point of elevation is at Baxterville in the western part of the county, 404 feet. The lowest point of elevation is at Okahola on Black Creek in the eastern part of the county, 232 feet. In most cases the bottomlands along the small drainage ways have a width of 50 to 100 yards and are poorly drained and swampy; there are some swampy areas along the larger streams but of small extent. There are no prairie lands or flat wood regions in Lamar County. In the western part of Lamar County is a very rugged, hilly section known as the "Devil's Backbone". This extends into Marion County. Lamar County has no rivers within its boundary but it occupies the divide between Pearl River on the west and Leaf River on the east. Lamar County as a whole has a well-established natural drainage system in three main creeks and their tributaries which consist of Black Creek, Little Black Creek, and Red Creek.

Black Creek begins in the northwest part of the county flowing in a southeastward direction through the county toward Dead Lake in Jackson County. Little Black flows from the foothills near Baxterville southeastward through the county on into Big Black, south of Camp Dantzler in Forrest County. Red Creek flows from the springheads of the Rayborn Hills in the central eastern part of the county to the southeast part of Lumberton, merging also into the Dead Lake in Jackson County. All three ultimately flow into the Pascagoula River.

Tributaries of Black Creek are Monroe, Parker, and Perkins Creeks. Their names originated from the first settlers on these creeks and were so handed down through generations. Sandy Run is named for its sandy bed. Little Black is named due to the color of its water. Two other creeks in the extreme northern part of the county are Tick Creek, named because it is infested with these insects, and Big Creek named in comparison to other adjacent creeks. Tributaries of Little Black Creek are Boggy Hollow, named from the miry nature of its soil and cows would bog easily when they would go there to drink water; and Little Beaver Creek, named for the many beavers that inhabited

it once. Dry Branch, just south of Lumberton, is a tributary of Red Creek, so called because it never runs dry. It is a very swift stream that drains the southern section of the county. In the north western part of the county is Upper Little Creek and its tributaries are Herron Creek and Polk Creek, named for the first settlers. In the western part is Lower Little Creek and its tributaries are Gully, Beaver Dam, Hurricane Bay, Half Moon, Burnt Reed Brake, Spice Pond Creek and Grantham Creek. In the southwestern part are White Oak, Middle Fork, Dry and Clear Creeks.

This network of streams and their tributaries afford an excellent drainage system for the entire county. The County Health Officer attributes the excellent health record of the county to its drainage, which prevents stagnant water and miasmatic ponds. In some places the drainage is excessive; this necessitates terracing to hold soil.

## **B. Climate in Lamar County**

The climate of Lamar County is mild with mean annual temperatures in the upper 60's. Average winter temperatures range from 50 to 60 degrees Fahrenheit with summer temperatures ranging from 85 to 95 degrees Fahrenheit. Rainfall averages approximately 62 inches annually with the majority of the accumulation in July through September. Wind speeds are generally less than 10 miles per hour, but often increase during storms. Thunderstorms occur frequently and are sometimes accompanied by strong to severe winds, including tornadoes.

## **C. History of Lamar County**

On February 19, 1904, Lamar was created from the Second Judicial District, the eastern half of Marion, including a small part of northern Pearl River County that had originally been a part of Hancock County, and which was a small section of the territory below the Demarcation line that was obtained by the treaty of Ghent at the close of the war with England in which Spain was involved, 1812-1815.

Lamar County, which was named for the illustrious L.Q. Lamar, was instituted and began to function April 1, 1904, following the proclamation of Governor James K. Vardaman on March 30, 1904 at which time the governor appointed officers for the new county. The newly appointed election commissioners divided the county into five districts. The appointment stood until the election was held the following May.

Purvis, the county seat, is located seventeen miles south of Hattiesburg on U.S. Highway 11. In 1883, where Purvis now stands, there was a huge forest of pine trees with very few inhabitants, but plenty of wild game-deer, turkey and squirrel. No towns existed in this section until the construction of the New Orleans and Northeastern Railroad, about the year 1883, when villages began to spring up. Among these was Purvis, named by railroad officials after Thomas Melvin Purvis, who left Greene County in 1871 and homesteaded 160 acres of land on which the town is now located.

The legislature of 1888 incorporated Purvis as a municipality, and the same legislature provided for an election on the first Monday in May 1888, to determine whether Lumberton or Purvis would be the county seat of the Second Judicial District of Marion County. The election resulted in favor of Purvis.

In August 1892, an insurance policy was written on the frame courthouse for \$2000, and in September a contract was awarded the Manley Manufacturing Company of Dalton, Georgia, to build a jail for the sum of \$2,945.

The first meeting of the Board of Supervisors of Marion County, Second Judicial District, was held in the courthouse in this new municipality June 30, 1890.

Once Lamar County was established, the newly elected Board of Supervisors held a special meeting in January 1905 for the purpose of letting a contract for a new courthouse to be built in Purvis for the sum of \$43,516 to P.H. Weathers, architect, Jackson, Mississippi. Before the year was over a beautiful two-story courthouse of brick and stone was completed, and during the same year the mayor and board of alderman declared the town to be a separate municipal school district and in 1906 issued to erect a large two-story brick school building.

#### **D. Early Settlements**

Before the white settlers came, the Choctaw Indians roamed through the heavy pine timber that grew in abundance over the county. There was an ancient Indian settlement in the extreme northwest end of the county, and there was an Indian Village about ten miles from Sumrall on Black Creek where the Russell Bridge now spans the creek.

(Later part of 1700 or early 1800)

About the time the battle of New Orleans was fought and won by Andrew Jackson a large tide of immigration poured into the southern section of the present county, principally from the Carolinas. Low-priced lands that could be homesteaded, by the mild climate, the luxurious range for stock, attracted new people and the cheap living afforded by an abundance of wild game, such as turkey, ducks, geese and the corn could be grown there. Raising sheep and cattle was their main industry.

About fifty years later these people came the northern part of Lamar County either began or was settled. It is not known where the people originally came from, but most of them migrated to Lamar County from nearby counties. They all farmed, and each farm or plantation was equipped in such a way that only two or three trips a year had to be made to a trading post. Most of them traded at Pass Christian, Mississippi a distance of about ninety miles. The trips were made in ox-wagons and required about eleven days in good weather. There were no trading posts or settlements within the county until about 1870.

### **III. Vulnerability Analysis**

#### **A. People**

Protection of life and property of the residents of Lamar County in the event of a natural or manmade disaster such as widespread wind damage from hurricanes, tornadoes, widespread flooding and terrorist attacks is a primary goal of county officials. Of concern are vulnerable populations who are considered to be of particular risk. Those populations include the following persons:

- Elderly and disabled persons – This segment of the population is considered particularly vulnerable to a natural disaster. Many have mobility problems, are physically unable to make preparations and may not be able to evacuate or recover without assistance.
- Lower income persons – Lower income persons are considered at risk due to their limited financial resources to make preparations to protect property, evacuate and recover from a disaster. Additionally, many lower income persons may reside in older mobile homes or other substandard housing that may not be constructed to withstand high winds or be out of harms way from rising water.
- Persons with special medical needs – Included are chronically ill persons and those requiring life support equipment such as oxygen. Also included are homebound persons who are dependent upon others for day-to-day care and persons with mobility needs, also full time residents of extended care facilities.
- Temporary populations – Interstate 59, a primary evacuation route from the New Orleans area, runs just east of the corporate limits of the City of Purvis. When storms have threatened southeastern Louisiana in the past, large numbers of refugees have arrived in Lamar County, seeking emergency services such as sheltering, food and fuel.

## **B. Buildings and Infrastructure**

The buildings such as the County Administration Buildings, County Law Enforcement Complex, County Courthouses, and the City Halls of the Municipalities house the infrastructure of the governments in Lamar County.

## **C. Critical Facilities**

In the event of a disaster, Lamar County and its municipalities must be prepared to protect and maintain their critical facilities. A map of the critical facilities is shown in appendix 3. Critical facilities are defined as follows:

- Hospitals, nursing homes and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood or other emergency.
- Public safety facilities such as fire stations, vehicle and equipment storage facilities and emergency operations centers needed for disaster response activities before, during and after a flood or other disaster.
- Public and private utilities that is vital to maintaining or restoring normal services to areas before, during and after a flood or other disaster.
- Structures or facilities that produce use or store highly volatile, flammable, explosive toxic and/or water-reactive materials.
- Roads and bridges

Most county owned and municipal buildings in the county are considered critical facilities. These include buildings for operation and continuity of county and municipal

governments, Police and Sheriff's station, fire stations, public works centers, and the County's correctional facility.

Table 2

<b><i>Multi-Jurisdictional Critical Government Facilities</i></b>		
<b>Name</b>	<b>Location</b>	<b>Jurisdiction Location</b>
Lamar County Circuit Courthouse	Main St, Purvis	Purvis
Lamar County Chancery Courthouse	Main St, Purvis	Purvis
Lamar County Sheriff's Department	Main St, Purvis	Purvis
Lamar County Correctional Facility	Main St, Purvis	Purvis
Lamar County Emergency Management	Purvis Oloh Rd	Unincorporated Lamar
Lamar County Road Department South	Purvis to Baxterville Rd	Unincorporated Lamar
Lamar County Road Department North	Grantham Rd	Unincorporated Lamar
Purvis City Hall / Police Department	Shelby Speights Dr	Purvis
Purvis Fire Department	Main St	Purvis
Purvis Public Works	Purvis to Baxterville Rd	Purvis
Sumrall City Hall / Police Department	Hwy 589	Sumrall
Sumrall Fire Department	Water Ave	Sumrall
Sumrall VFD County Station	Epley Rd	Unincorporated Lamar
Sumrall Public Works	Water Ave	Sumrall
Lumberton City Hall / Police Department	E Main St	Lumberton
Lumberton Fire Department	9 <sup>th</sup> Ave	Lumberton
Lumberton Public Works	N Front St	Lumberton
Central Lamar VFD Station #1	Keystone Dr	Unincorporated Lamar
Central Lamar VFD Station #2	WPA Rd	Unincorporated Lamar
Central Lamar VFD Station #3	Hwy 589	Unincorporated Lamar
Hickory Grove VFD Station #1	Newman Camp Rd	Unincorporated Lamar
Hickory Grove VFD Station #2	Rocky Branch Rd	Unincorporated Lamar
Northeast Lamar VFD Station #1	W 4 <sup>th</sup> St	Unincorporated Lamar
Northeast Lamar VFD Station #2	Weathersby Rd	Unincorporated Lamar
Oak Grove VFD Station #1	Old Hwy 24	Unincorporated Lamar
Oak Grove VFD Station #2	Old Okahola School Rd	Unincorporated Lamar
Oloh VFD	Purvis Oloh Rd	Unincorporated Lamar
Oloh VFD Station #1	Old Hwy 24	Unincorporated Lamar
Pine Ridge VFD Station #1	Hwy 589	Unincorporated Lamar
Pine Ridge VFD Station #2	Purvis Oloh Rd	Unincorporated Lamar

Southeast Lamar VFD Station #1	U.S. Hwy 11	Unincorporated Lamar
Southeast Lamar VFD Station #2	Little Black Creek Rd	Unincorporated Lamar
Southeast Lamar VFD Station #3	4 Mile Rd	Unincorporated Lamar
Southwest Lamar VFD Station #1	Hwy 13	Unincorporated Lamar
Southwest Lamar Station #2	Bay Creek Rd	Unincorporated Lamar
Southwest Lamar VFD Station #3	Purvis to Columbia Rd	Unincorporated Lamar
Rock Hill VFD Station #1	Old Hwy 11	Unincorporated Lamar
Lamar County Community Shelter	Central Industrial Row	Purvis

The emergency shelters located in the county are also considered critical facilities. The locations of critical facilities in Lamar County are shown on Table 3. Emergency shelters are located throughout the county for use by persons who either live in unsafe structures, evacuation zones or areas likely to flood.

**Table 3**

Multi-Jurisdictional Shelter Listing		
Shelter Name	Location	Capacity
Baxterville Attendance Center	Bilbo Rd	350-400
1 <sup>st</sup> Baptist Church of Purvis	Shelby Speights Dr	150-200
Oak Grove High School	Old Hwy 11	500-1100
Oak Grove Middle School	Old Hwy 24	250-300
Purvis High School	School St	200-250
Sumrall Attendance Center	Hwy 42	150-190
Lamar County Community Shelter	Central Industrial Row	800-1000

One hospital, and several skilled nursing facilities housing elderly or severely disabled residents, is also located in the county. Most are located outside of flood prone areas, but all could be vulnerable to hurricane winds or tornadoes.

**Table 4**

Hospitals, Health Care Providers, and Nursing Homes		
Name	Address	Type Facility
Wesley Medical Center	5001 Hardy St, Hattiesburg	Hospital
Purvis Family Clinic	102 Shelby Speights Dr, Purvis	Medical Clinic
Lake Serene Clinic	6813 US Hwy 98, Hattiesburg	Medical Clinic
The Family Clinic	101 Weems St, Purvis	Medical Clinic
Wesley Medical Clinic	5808 US Hwy 11, Purvis	Medical Clinic
Lumberton Family Clinic	598 W 11 <sup>th</sup> Ave, Lumberton	Medical Clinic
Sumrall Family Health	1109 Hwy 42	Medical Clinic
Oak Grove Family Clinic	4902 Old Hwy 11, Hattiesburg	Medical Clinic
After Hours Clinic	110 Millsap Dr, Hattiesburg	Medical Clinic

Oxford Health & Rehabilitation Center	6428 US Hwy 11, Purvis	Nursing Home
Windham House	37 Hillcrest Dr, Hattiesburg	Assisted Living
Magnolia Place	4901 Hwy 589, Sumrall	Assisted Living

Mississippi Power Company and Pearl River Valley EPA furnish electric power to Lamar County. Natural gas is available in the county's three municipalities and propane gas is widely distributed by several dealers. Bell South furnishes the telephone communications system; additionally, several other companies provide cellular telephone service to the county. Because of their importance in maintaining communication during an emergency, cellular phone towers are considered critical facilities in Lamar County. The public utility companies have mutual aid pacts with other providers to furnish assistance when major damage occurs to their transmission systems. Both have disaster response plans in place and are responsible for their distribution systems and facilities', ensuring that service is restored as quickly as possible after a disaster occurs.

Several flammable storage facilities are located in the county. Additionally, several industrial interests manufacture or use flammable, toxic, explosive or water-reactive materials in their manufacturing process. Lamar County Fire Services and the Emergency Management Agency recognize these as critical facilities; most have disaster response plans in place and are responsible for their facilities.

#### **D. Natural and Environmental Hazards**

An inventory of hazards affecting Lamar County was made as part of the planning process. Hazards were classified into two categories, as follows:

- Natural and environmental hazards – Included are those hazards generally classified as “acts of God” such as hurricanes, windstorms, floods, tornadoes and other naturally occurring events. Also included in this category sure flooding due to human negligence and error.
- Technological hazards – Man made hazards including terrorist attacks. Hazards include lack of adequate transportation infrastructure, traditional manufacturing concerns, chemical plants and tank farms containing flammable or potentially dangerous materials. Because of the amount of potentially dangerous it transports across Lamar County, railroads are included in this category. Terrorist attacks include bombings, biological warfare, radioactive fallout from nuclear blasts, dirty bombs, and nuclear power house core melt downs.

#### **E. Economy**

The economy is primarily based on the success of retail along Highway 98, medical facilities along Highway 98, and timber recourses through the county. If either were impacted by a disaster, it could adversely affect the local economy.

## IV. Hazards Identification 201.6(c)(2)(i)

Creeks draining through the county and surrounding areas are highly susceptible to flooding due to heavy rainfall, particularly in the northeast portion of the county.

The county is also particularly vulnerable to tornadoes and other damaging windstorms. Of particular concern are residents living in structures not constructed to withstand high winds that are often damaged when these storms occur. The assessment of the vulnerabilities has been prioritized as follows:

### 1. Windstorms / Thunderstorms

Due to Lamar County's and the Municipalities' location in the Gulf Coast Region, thunderstorms are frequent to the area. Thunderstorms often cause damaging wind, heavy rain, and severe lighting. The thunderstorms can also produce tornadoes and hail storms.

Local records indicate numerous thunderstorms in Unincorporated Lamar County and its jurisdictions since the Lamar County Emergency Agency was formed in 1997. Typical damage during a windstorm / thunderstorm is down trees on power lines. All jurisdictions have aerial power lines that supply all residences electrical services. Power outages usually last 4-6 hours and poses more of an inconvenience than anything. It is not unusual for there to be structure damage with these types of storms, the damage usually consist of roof damage from the winds and from trees falling onto the homes. This damage is usually attributed to the squall lines associated fronts that move across the area. This type of damage can affect each of the jurisdictions equally and typically does. The following chart shows the number of Thunderstorm watches and warnings for all of the jurisdictions from 1998 to 2005. (Please see Appendix 3 for the continuation of this chart for more recent storm events)

Table 6

Thunderstorm Watches / Warnings	
Type	Number
Thunderstorm Watches	33
Thunderstorm Warnings	60
Thunderstorm Watches (2007-2012)	59
Thunderstorm Warnings (2007-2012)	224

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
<a href="#">1 Sumrall</a>	5/5/2000	1:15 PM	Tstm Wind	0 kts.	0	0	5K	0
<a href="#">2 Oak Grove</a>	6/25/2000	4:25 PM	Tstm Wind	0 kts.	0	0	2K	0
<a href="#">3 Purvis</a>	6/26/2000	1:30 PM	Tstm Wind	59 kts.	0	0	2K	0
<a href="#">4 Countywide</a>	7/16/2000	4:50 PM	Tstm Wind	0 kts.	0	0	8K	0



<a href="#">5 Lumberton</a>	7/20/2000	9:10 PM	Tstm Wind	0 kts.	0	0	2K	0
<a href="#">6 Sumrall</a>	7/22/2000	5:10 PM	Tstm Wind	0 kts.	0	0	5K	0
<a href="#">7 Sumrall</a>	8/10/2000	5:20 PM	Tstm Wind	0 kts.	0	0	2K	0
<a href="#">8 Lumberton</a>	8/20/2000	4:50 PM	Tstm Wind	0 kts.	0	0	3K	0
<a href="#">9 Oak Grove</a>	8/25/2000	3:15 PM	Tstm Wind	0 kts.	0	0	8K	0
<a href="#">10 Purvis</a>	8/25/2000	3:50 PM	Tstm Wind	0 kts.	0	0	5K	0
<a href="#">11 Oak Grove</a>	8/26/2000	3:30 PM	Tstm Wind	0 kts.	0	0	2K	0
<a href="#">12 Oak Grove</a>	8/26/2000	4:10 PM	Tstm Wind	0 kts.	0	0	8K	0
<a href="#">13 Lumberton</a>	8/27/2000	4:20 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">14 Sumrall</a>	8/31/2000	2:35 PM	Tstm Wind	0 kts.	0	0	60K	0
<a href="#">15 Oak Grove</a>	9/5/2000	4:30 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">16 Oak Grove</a>	10/6/2000	9:45 AM	Tstm Wind/hail	0 kts.	0	0	10K	0
<a href="#">17 Oak Grove</a>	11/9/2000	1:30 AM	Tstm Wind	0 kts.	0	0	2K	0
<a href="#">18 Lumberton</a>	12/13/2000	6:35 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">19 MSZ037 - 045 - 047&gt;048 - 051 - 054 - 057 - 060 - 062&gt;063 - 073&gt;074</a>	12/16/2000	1:30 PM	High Wind	0 kts.	0	0	38K	0
<a href="#">20 Sumrall</a>	1/19/2001	5:50 AM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">21 Sumrall</a>	1/29/2001	12:45 PM	Tstm Wind	0 kts.	0	0	5K	0
<a href="#">22 Lumberton</a>	3/12/2001	4:18 AM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">23 Oak Grove</a>	6/4/2001	4:00 PM	Tstm Wind	0 kts.	0	0	18K	0
<a href="#">24 Countywide</a>	6/4/2001	5:05 PM	Tstm Wind	0 kts.	0	0	2K	0
<a href="#">25 Baxterville</a>	6/6/2001	8:30 AM	Tstm Wind	0 kts.	0	0	20K	0
<a href="#">26 Countywide</a>	6/11/2001	5:30 AM	Tstm Wind	0 kts.	0	0	40K	0
<a href="#">27 Baxterville</a>	6/11/2001	7:30 AM	Tstm Wind/hail	0 kts.	0	0	20K	0
<a href="#">28 Oak Grove</a>	11/24/2001	12:05 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">29 Lumberton</a>	11/29/2001	10:30 AM	Tstm Wind	0 kts.	0	0	1K	0

<a href="#">30 Purvis</a>	12/13/2001	9:00 PM	Tstm Wind	0 kts.	0	0	5K	0
<a href="#">31 Purvis</a>	4/8/2002	2:00 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">32 Baxterville</a>	5/17/2002	3:20 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">33 Purvis</a>	5/17/2002	3:30 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">34 Lumberton</a>	7/1/2002	2:35 PM	Tstm Wind	0 kts.	0	0	1K	0
<a href="#">35 Sumrall</a>	7/21/2002	2:00 PM	Tstm Wind	0 kts.	0	0	2K	0
<a href="#">36 Purvis</a>	12/31/2002	4:20 AM	Tstm Wind	60 kts.	0	0	3K	0
<a href="#">37 Sumrall</a>	2/15/2003	7:15 PM	Tstm Wind	52 kts.	0	0	1K	0
<a href="#">38 Oak Grove</a>	4/24/2003	3:17 PM	Tstm Wind	50 kts.	0	0	10K	0
<a href="#">39 Sumrall</a>	5/17/2003	5:00 PM	Tstm Wind	50 kts.	0	0	5K	0
<a href="#">40 Sumrall</a>	6/14/2003	1:30 PM	Tstm Wind	50 kts.	0	0	1K	0
<a href="#">41 Sumrall</a>	7/17/2003	8:10 PM	Tstm Wind	53 kts.	0	0	10K	0
<a href="#">42 Hattiesburg</a>	7/22/2003	4:35 PM	Tstm Wind	53 kts.	0	0	20K	0
<a href="#">43 Sumrall</a>	8/6/2003	8:25 PM	Tstm Wind	53 kts.	0	0	8K	0
<a href="#">44 Hattiesburg</a>	10/26/2003	1:55 AM	Tstm Wind	50 kts.	0	0	10K	0
<a href="#">45 Purvis</a>	11/18/2003	10:00 AM	Tstm Wind	50 kts.	0	0	1K	0
<a href="#">46 Countywide</a>	6/27/2004	9:15 AM	Tstm Wind	55 kts.	0	0	5K	0
<a href="#">47 Oak Grove</a>	7/16/2004	4:37 PM	Tstm Wind	55 kts.	0	0	2K	0
<a href="#">48 Lumberton</a>	7/16/2004	11:45 AM	Tstm Wind	60 kts.	0	0	8K	0
<a href="#">49 Baxterville</a>	4/30/2005	3:32 AM	Tstm Wind	55 kts.	0	0	0	0
<a href="#">50 Purvis</a>	4/30/2005	3:37 AM	Tstm Wind	52 kts.	0	0	0	0
<a href="#">51 Purvis</a>	5/29/2005	12:00 PM	Tstm Wind	53 kts.	0	0	3K	0
<a href="#">52 Baxterville</a>	7/2/2005	6:42 PM	Tstm Wind	55 kts.	0	0	15K	0
<a href="#">53 Purvis</a>	8/21/2005	3:15 PM	Tstm Wind	53 kts.	0	0	10K	0

## 1. Flooding

In 2010, the Town of Sumrall, the City of Purvis, and the City of Lumberton entered into an inter-local agreement with the Lamar County Board of Supervisors allowing the County Floodplain Manager to administer their Flood Damage Prevention

Ordinances, keeping them in compliance with the NFIP. This process is done by sending all of their constituents to the County office for their flood permits for review and compliance purposes. The permit is then forwarded to the correct Jurisdiction for final signatures by the Mayor/Clerk. The recorded inter-local agreements can be found at the Lamar County Chancery Clerk's office.

The Town of Sumrall is more likely to flood due to the low area that the City is built in. Critical infrastructure such as City Hall and the Police Department are housed in the same building that is usually affected by floodwater resulting from drainage issues. Local records show that the extent of damage, thus far, has been minor and has affected only a few commercial structures and a few residences. All of these structures are located out of the Special Flood Hazard Area (SFHA), therefore; they are not considered repetitive loss properties. Per out FRIM Maps that were adopted on March 2, 2010, there are no structure located in a SFHA within the city limits of Sumrall.

The City of Lumberton has a flood prone area as well, but very rarely has any structures been affected. All of the structures surrounding this area are outside of the SFHA. This area is located along the part of Red Creek that runs through Lumberton. Lumberton has no structures placed inside a SFHA within the city limits.

The City of Purvis has a flood prone area in the western part of the city. Rarely has the City seen any flood problems. The SFHA found within the city limits of Purvis is all forestry land. There are no structures located in the SFHA.

Unincorporated Lamar County has areas that are susceptible to flooding. The area of particular concern is in the northeast portion of the county along Mixon and Turtle Creek also known as Westover. These creeks are highly susceptible to flooding due to heavy rainfall. Local reports suggest that 3 to 4 inches of rain in a two-hour period usually causes this area to flood.

Repetitive Flood Loss to properties is of great concern to Lamar County. The National Flood Insurance Program (NFIP), describes a repetitive loss property as "one for which two or more claims for flood damages exceeding \$1,000 have been paid in the previous ten years." FEMA and the NFIP estimate that repetitive losses account for approximately 40 percent of all flood insurance claims. The major source of repetitive flood loss has been in the northeastern part of the county around the Mixon and Turtle Creek area.

In all areas of special flood hazard, the Flood Plain Damage Prevention Ordinance for all jurisdictions within the incorporated and unincorporated areas of Lamar County, requires that new construction or substantial improvement of any residential structure have the lowest floor elevated to two feet above the base flood elevation identified on the NFIP Flood Insurance Rate Map (FIRM). Nonresidential structures are required to be elevated or dry flood proofed. If dry flood proofing is utilized, certification by a professional engineer is required.

The Flood Plain Damage Prevention Ordinance also places restrictions of subdivision proposals submitted for approval as follows:

- All subdivision proposals must address the need to minimize flood damage;
- All subdivision proposals must include plans for public utilities and facilities located in the subdivision to be constructed to minimize flood damage;
- All subdivision proposals must include plans for drainage designed to reduce exposure to flood hazards;
- Base flood elevation data must be included for subdivision proposals and other proposed development greater than 5 lots or 5 acres.

The ordinance also places special requirements of the location of mobile homes in flood hazard areas, and that mobile homes are designed to resist flotation, collapse or lateral movement in the event of a flood.

Most of the repetitive loss properties in the county are pre-FIRM structures, constructed prior to the county participating in the National Flood Insurance Program (NFIP). The County and Municipal Permitting Officials are very conscientious about enforcement of their flood plain management ordinances when it comes to permitting new construction. The high incidence of flood losses reported for pre-flood insured properties indicates that owners of repetitively flooded properties have relied primary upon the NFIP or public assistance to cover their repetitive flood losses. Properties located in or near an identified flood hazard area are most likely to flood.

The NFIP requires retrofitting to reduce flood damage when cumulative losses exceed 50% of the property's value. This is a difficult rule to enforce because after a major flood or natural disaster, building officials often waive issuing permits in order to assist owners with recovery. Additionally, when flood damage does not include structural damage or damage to electrical or gas services requiring inspection before being restored, owners simply proceed with repairs without contacting local Building Permit Office. The 50% rule is an essential tool in reducing flood losses and while difficult to track, should be a priority issue for the Flood plain Manager after a flood or natural disaster. It is strongly recommended that all jurisdictions require issuance of permits in order to track these cases.

Funding is available to local government through the Hazard Mitigation Grant Program to retrofit or acquire repetitively flooded properties. The Community Development Block Grant (CDBG) and Home Investment Partnership Act (HOME) programs also offer grant funding to local jurisdictions on a competitive basis. As well as other purposes, CDBG and Home program funds can be used for retrofitting flood prone structures, especially in lower areas. Historically, most flood losses in Lamar County have resulted from storm water flooding. The following are local records of floods since 1998:

**Table 7**

Date	Area	Cause	Number of Structures
September 1998	Westover	Hurricane George	40
January 1999	Westover	Thunderstorms	31
September 2000	Westover	Thunderstorms	N/A
March 2001	Westover	Thunderstorms	N/A
June 2001	Westover	Thunderstorms	N/A

September 2001	Westover	Thunderstorms	14
December 2001	Westover	Thunderstorms	15
September 2002	Westover	Thunderstorms	8
June 2003	Westover	Thunderstorms	29
February 2004	Westover	Thunderstorms	13
June 2004	Westover	Thunderstorms	N/A
March 2005	Sumrall	Thunderstorms	3
April 2005	Sumrall	Thunderstorms	1
April 2007	Westover	Thunderstorms	11
March 2008	Westover	Thunderstorms	4
March 2009	Westover	Thunderstorms	8
March 2011	Westover	Thunderstorms	2

The same homes have flooded all 17 times listed above. The damage to the homes in this area of Lamar County has been minor damage (6" of water) to major damage (6' of water). 15 of 34 homes in this area have been mitigated by being removed from the properties through a Buy-Out Program in Lamar County that ended in 2007. One additional property was demolished when a commercial developer purchased an entire subdivision for a new development, which does not fall into the Special Flood Hazard Area any longer per our FIRM maps (adopted March 2, 2010). Most of these homes were rental properties. Lamar County does not have any commercial nor industrial facilities that are considered repetitive loss properties. This leaves Lamar County with a total of 18 residential structures that are listed as repetitive loss properties that are still susceptible to flooding.

## 2. Tornadoes

On April 24, 1908, the town of Purvis was practically destroyed by a cyclone listed as one of the Top Ten US Killer Tornadoes. In Lamar County, 55 to 60 deaths occurred as most of the town of Purvis was leveled to the ground. Only seven of 150 homes in town were reported standing, as losses totaled over \$500,000, and 400 people were injured.

The Federal Emergency Management Agency has designated Unincorporated Lamar County and the Municipalities as a Category IV Wind Zone area. Area located in Category IV Wind Zones is considered to be at high risk for experiencing winds that can reach velocities as high as 200 miles per hour. Additionally, based upon NOAA, Storm, Prediction Center Statistics, Lamar County is also included in an area where 11 to 15 tornadoes per 1,000 square miles have been recorded. This is borne out in reports from the National Climatic Data Center report for the years between 1993 and 2000.

The Fujita Scale from FO to F5 has been changed to a reading of EFO to EF5 which is currently used to categorize tornadoes. Tornadoes typically occur in the spring and summer months but can occur at any time and are often spawned by hurricanes and tropical weather systems. Table 2 shows categories on the Fujita scale and typical tornado damage that can be expected in each category:

Table 8

Category	Typical Damage
EFO – Light	Chimneys are damaged, tree branches are broken, shallow rooted trees are toppled.
EF1 – Moderate	Roof surfaces are peeled off, windows are broken, some tree trunks are snapped, unanchored mobile homes are overturned, and attached garages may be destroyed.
EF2 – Considerable	Roof structures are damaged, mobile homes are destroyed, debris becomes airborne, missiles are generated, and large trees are snapped or uprooted.
EF3 – Severe	Roofs and some walls are torn from structures, small buildings are destroyed, and most trees are uprooted.
EF4 – Devastating	Well-constructed houses are destroyed; some structures are lifted from foundations and blown some distance. Cars are blown some distance, large debris become airborne.
EF5 – Incredible	Strong frame houses are lifted from foundations, reinforced concrete structures are damaged, automobile sized missiles become airborne, and trees are completely debarked.

Debris and other objects picked up by the wind create missiles and are moved with enough force to damage and even penetrate windows, doors, walls, and other parts of buildings. In general, the stronger the wind, the larger and heavier the missiles it can carry and the greater the risk of severe damage. Even small stones, branches and other lighter missiles can easily break doors and windows.

Tornadoes are likely to damage any part of any jurisdiction during an event that will produce tornadoes.

Table 9

EOC Activations for Tornado related events (since 1998)	
Type Issued	Number Issued
Tornado Watches	26
Tornado Warnings	11
Tornado Reported	3 (2 confirmed)
EOC Activations for Tornado related events (since 2009)	
Tornado Watches	59
Tornado Warnings	224

Since tornadoes are hard to predict, the mitigation efforts have focused on programs to educate the public on early warning, proper sheltering techniques, and both individual and community storm shelters. In the educational programs, the importance of NOAA weather radios and other early warning devices are one of the main topics. Due to the terrain, timber, and separation of residences in Unincorporated Lamar County, the uses of sirens as early warning devices are

cost prohibitive. Other means of early warning, such as reverse 911, are being investigated to determine the effectiveness and the feasibility.

NCDC tornadoes are listed below.

**24 TORNADO(s)** were reported in **Lamar County, Mississippi** between **04/30/1950** and **08/31/2011**.

**Mag:** Magnitude  
**Dth:** Deaths  
**Inj:** Injuries  
**PrD:** Property Damage  
**CrD:** Crop Damage

Mississippi								
Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
1 <a href="#">LAMAR</a>	02/20/1954	0035	Tornado	F2	0	10	250K	0
2 <a href="#">LAMAR</a>	02/26/1958	1800	Tornado	F2	0	5	250K	0
3 <a href="#">LAMAR</a>	02/21/1961	1720	Tornado	F1	0	0	3K	0
4 <a href="#">LAMAR</a>	08/19/1965	1345	Tornado	F1	0	0	0K	0
5 <a href="#">LAMAR</a>	11/13/1972	1130	Tornado	F2	0	0	250K	0
6 <a href="#">LAMAR</a>	09/09/1974	1500	Tornado	F1	0	0	0K	0
7 <a href="#">LAMAR</a>	02/16/1975	2030	Tornado	F1	0	0	25K	0
8 <a href="#">LAMAR</a>	11/22/1989	1530	Tornado	F2	0	0	250K	0
9 <a href="#">LAMAR</a>	08/27/1992	1815	Tornado	F0	0	0	3K	0
10 <a href="#">Purvis</a>	03/09/1994	1020	Tornado	F0	0	0	5K	0
11 <a href="#">Clyde</a>	04/11/1995	0515	Tornado	F1	0	0	50K	0
12 <a href="#">Sumrall</a>	01/15/1997	04:49 PM	Tornado	F1	0	2	100K	0
13 <a href="#">Purvis</a>	11/09/2000	01:50 AM	Tornado	F0	0	0	3K	0
14 <a href="#">Sumrall</a>	02/16/2001	03:39 PM	Tornado	F0	0	0	1K	0
15 <a href="#">Oloh</a>	03/12/2001	09:40 AM	Tornado	F1	0	7	4.5M	0
16 <a href="#">Sumrall</a>	10/13/2001	12:30 PM	Tornado	F0	0	0	1K	0
17 <a href="#">Purvis</a>	01/07/2005	09:35 PM	Tornado	F2	0	0	200K	0

18 <a href="#">Purvis</a>	03/20/2006	04:10 PM	Tornado	F1	0	1	500K	0
19 <a href="#">Hattiesburg</a>	10/17/2006	02:39 AM	Tornado	F2	0	0	700K	0K
20 <a href="#">Lumberton</a>	10/27/2006	06:45 AM	Tornado	F1	0	0	0K	50K
21 <a href="#">Sumrall</a>	11/15/2006	02:30 AM	Tornado	F3	0	6	1.5M	0K
22 <a href="#">Purvis</a>	11/15/2006	03:50 AM	Tornado	F1	0	0	100K	0K
23 <a href="#">Purvis</a>	05/15/2008	09:05 AM	Tornado	F1	0	0	10K	0K
24 <a href="#">Wardwell Station</a>	12/10/2008	01:13 AM	Tornado	F1	0	0	700K	0K
TOTALS:					0	31	9.401M	50K

### 3. Hurricanes

Lamar County and its Municipalities, due to their location and proximity to the Mississippi Gulf Coast, are susceptible to Tropical Storms and Hurricanes. Lamar County may not feel the full effects of a Tropical Storm or Hurricane, however; depending on the strength and landfall location the county could expect to receive strong winds and heavy rains, flooding and wind damage.

On August 29, 2005, Lamar County, including all three municipalities, were directly affected by Hurricane Katrina. Hurricane Katrina was a Category 3 storm that brought many tornados and flood waters to Lamar County. There was an estimated total of 17,863 structures with minor damage, 5,617 structures with major damage, and 137 structures destroyed throughout the County. There were no fatalities during this storm only minor injuries.

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 rating based on a hurricane's sustained wind speed. This scale estimates potential property damage. Hurricanes reaching Category 3 and higher are considered major hurricanes because of their potential for significant loss of life and damage. Category 1 and 2 storms are still dangerous, however, and require preventative measures.



Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	<b>Very dangerous winds will produce some damage:</b> Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph 83-95 kt 154-177 km/h	<b>Extremely dangerous winds will cause extensive damage:</b> Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3 (major)	111-129 mph 96-112 kt 178-208 km/h	<b>Devastating damage will occur:</b> Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4 (major)	130-156 mph 113-136 kt 209-251 km/h	<b>Catastrophic damage will occur:</b> Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher 137 kt or higher 252 km/h or higher	<b>Catastrophic damage will occur:</b> A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

According to the Atlantic Oceanographic and Meteorological Laboratory's Tropical Cyclone Climatology Page, all jurisdictions have a 30 to 40 percent chance to experience the effects of a Tropical Storm or Hurricane in any given year.

Research from the National Hurricane Center says that eighteen (18) Tropical Storms or Hurricanes have affected the Mississippi Gulf Coast since 1954. Local records, since 1998, show that five (5) storms have affected Lamar County with wind damage and/or flooding.

Hurricane damage affects all areas of each jurisdiction and is consistent throughout each jurisdiction. NCDC Tropical Storm and Hurricane information is listed below.

Table 10

Location or County	Date	Time	Type	Mag	Dth	Inj
Lamar County	9/26/2002	2:00 AM	Tropical Storm Isidore	N/A	0	0
Lamar County	6/30/2003	1:00 PM	Tropical Storm Bill	N/A	0	0
Lamar County	7/1/2003	12:00 AM	Tropical Storm Bill	N/A	0	0
Lamar County	9/16/2004	12:00 AM	Hurricane/typhoon Ivan	N/A	1	0
Lamar County	7/6/2005	5:00 AM	Tropical Storm Cindy	N/A	0	0
Lamar County	8/29/2005	8:00 AM	Hurricane/typhoon Katrina	N/A	15	104
Lamar County	9/1/2008		Hurricane/typhoon Gustav	N/A	0	0

#### 4. Dam Failure

According to the Department of Environmental Quality Dam Safety Division, Lamar County has nine High Hazard Dams. Lamar County Emergency Management Agency is currently working with the owners of these dams to develop and/or update plans on each dam. The plans are addressing the issues of early warning, vulnerable structures, and future developments in the area of inundation as a result of failure. As a result of preplanning, a schedule of visual inspections is established to identify early sign of potential problems. One of the Dam Failures on record for Lamar County occurred in March 2004. The Big Bay Lake Dam failure caused the evacuation of 150 structures in Lamar and Marion Counties. As a result of the failure 130 homes sustained major damaged or were destroyed in the two counties. Some of the affected area was submerged in an estimated 15 feet of water. Numerous roads and bridges had to be repaired as a result of the release of approximately 7.5 billion gallons of water. Although, this was a major disaster for the county, no injuries or deaths resulted from the failure. The only other Dam Failure on record occurred in October 2004. The lake, known as Timber Lake, was approximately 90 acres. The water closed one road for several hours but did not cause any damage to homes or property. There are a total of 47 dams located throughout incorporated and unincorporated Lamar County, and 4 of them are classified as High Hazard, according to data provided by MARIS. Dam breaks will affect any area downstream of them in the event of a breach. Appendix 4 shows a map of dams throughout the multi-jurisdiction area.

Table 11

Dam Failures in Lamar County			
Date	Lake Name	Area Affected	Structures Affected
March 2004	Big Bay Lake	Southwest Lamar County	100
October 2004	York Lake	Southwest Lamar County	1 public road

The Municipalities do not have any dams within their jurisdiction.

## 5. Wildfires

Because of high annual precipitation amounts, Lamar County is not usually prone to property damaging wildfires. Occasionally, however, drought-like conditions prompted fire service officials to issue frequent bans against burning and become more concerned about encroachment of urban development into forest lands, creating the potential for property damaging wildfires. On occasion wildfires have destroyed structures, usually outbuildings, but for the most part the fires are contained causing only damage to timber. Of the four jurisdictions, Unincorporated Lamar County is the most prone to damage from wildfires. A map has been attached in appendix 5.

The Cities have less danger of property damaging wildfires. The way the property is landscaped reduces the effects wildfires have on these jurisdictions.

The following is a total of wildfire that occurred in Lamar County according to the Mississippi Forestry Commission; not all fires produced property damage:

Table 12

Wildfires In Lamar County			Structures		
Year	Number of Fires	Acreage	Destroyed	Damaged	Threatened
2004	106				
2005	167				
2006	195				
2007	85	2,168			
2008	75	2,363			
2009	85	1,539			
2010	50	1,099	0	0	14
2011	143	1,791	5	0	103
2012	40	263	2	0	28
TOTAL FY 2004-2012	946	9223	7	0	145

Throughout the past years, due to the weather conditions in Lamar County, we have not had any major wildfires. The structures that were involved in the fires that you see listed above were of no value because they were either abandoned houses, old barns, or run down out buildings. All of the reported fires have been either grass or timber burns that did not result in loss of life or property. Although the numbers have been minor in our area, this is always subject to change with the conditions of the weather.

## VI. Risk Assessment 201.6(c)(2)(i), 201.6(c)(2)(ii), 201.6(c)(2)(iii)

A history of events was collected from NCDC. From this information, we determined the history, vulnerability, impact, probability, and extent of hazards on each jurisdiction. The history, collected from 1/1/2000, to 10/31/2005 is listed with each hazard.

Due to the NCDC no longer having the history of events available, the Lamar County Emergency Management Operations team will know supply all history of events for each

event within unincorporated Lamar County, City of Purvis, Town of Sumrall, and City of Lumberton.

A priority scoring value has been assigned for each hazard. In the scoring system, each of the three criteria identified for describing and analyzing potential hazards is assigned a rating and their respective number. In this section, Low means that it rarely occurs, Medium means that it occurs sometimes, and High means that it occurs often.

Low	1 point
Medium	5 points
High	10 points

Since some criteria are judged to be more important than others, a weighting factor was established to balance out the total scoring. The following weights are as follows:

History	2
Vulnerability	5
Impact	10
Probability	7

**Table 13**

History:	Risk determined by past occurrences in each participating jurisdiction, where available, and by countywide occurrences.
Vulnerability:	Based on the total population from the jurisdiction and estimated projection on property values and facilities within the jurisdiction.
Impact:	Risk determination was established by taking into account the vulnerability of the jurisdiction/county as well as past history of occurrence. Determination was also based on the extent of the event located in previous hazard profile section of the plan.
Probability:	Determined by hazard frequency percentage located in the previous section of overall risk probability and frequency.

A composite score for each hazard is arrived at by multiplying the score value assigned to each criterion by its weight and then summing the four totals. For example:

**Table 14**

Hazard: Flood			
History	High	10pts x 2 weighting factor	= 20 pts
Vulnerability	Medium	5 pts x 5 weighting factor	= 25 pts
Impact	High	10 pts x 10 weighting factor	= 100 pts
Probability	Medium	5 pts x 7 weighting factor	= 35 pts
	Total		= 180 pts

All information has been compiled and created as to the various hazards in the Jurisdictions. Those hazards with the highest numerical scores will receive priority attention for planning and mitigation purposes. The methods used for determining the rating of High, Medium, and Low risks are as follows:

The following is the overall vulnerability summary table for jurisdictional hazards. Plan goals and objectives are prioritized according to this table.

**Table 15**

<b>Lamar County Hazard Identification and Analysis Worksheet Unincorporated County Hazards</b>					
<b>Types of Hazard and Associated Elements</b>	<b>Probability</b>	<b>Vulnerability</b>	<b>Impact</b>	<b>History</b>	<b>Total Score</b>
Windstorms/ Thunderstorms	High	High	High	High	
Priority Score	70	50	100	20	240
Flooding	High	Med	Med	High	
Priority Score	70	25	50	20	165
Tornadoes	High	Med	Med	High	
Priority Score	70	25	50	20	165
Hurricanes	Med	Med	Med	Med	
Priority Score	35	25	50	20	130
Wildfires	Med	Med	Low	Low	
Priority Score	35	25	10	2	72
Dam Failure	Low	High	Med	Med	
Priority Score	7	50	50	10	117

**Table 16**

<b>Lamar County Hazard Identification and Analysis Worksheet Municipal Hazards</b>						
<b>Municipality</b>	<b>Type of Hazard and Associated Elements</b>	<b>Probability</b>	<b>Vulnerability</b>	<b>Impact</b>	<b>History</b>	<b>Total Score</b>
Purvis	Windstorm/ Thunderstorm	High	Med	Med	Med	
	Priority Score	70	25	50	10	155
Lumberton	Windstorm/ Thunderstorm	High	Med	Med	Med	
	Priority Score	70	25	50	10	155
Sumrall	Windstorm/ Thunderstorm	High	Med	Med	Low	
	Priority Score	70	25	50	2	147
Purvis	Flooding	Low	Low	Low	Low	
	Priority Score	7	5	10	2	24

Lamar County Hazard Identification and Analysis Worksheet Municipal Hazards						
Municipality	Type of Hazard and Associated Elements	Probability	Vulnerability	Impact	History	Total Score
Lumberton	Flooding	Low	Low	Low	Low	
	Priority Score	7	5	10	2	24
Sumrall	Flooding	High	High	Med	Med	
	Priority Score	70	50	50	10	180
Purvis	Tornadoes	Med	Med	Med	Med	
	Priority Score	35	25	50	10	120
Lumberton	Tornadoes	Med	Med	Med	Low	
	Priority Score	35	25	50	2	112
Sumrall	Tornadoes	Med	Med	Med	Low	
	Priority Score	35	25	50	2	112
Purvis	Hurricanes	Med	Med	Med	Med	
	Priority Score	35	25	50	10	120
Lumberton	Hurricanes	Med	Med	Med	Med	
	Priority Score	35	25	50	10	120
Sumrall	Hurricanes	Med	Med	Med	Med	
	Priority Score	35	25	50	10	120
Purvis	Dam Failure	Low	Low	Low	Low	
	Priority Score	7	5	10	2	24
Lumberton	Dam Failure	Low	Low	Low	Low	
	Priority Score	7	5	10	2	24
Sumrall	Dam Failure	Low	Low	Low	Low	
	Priority Score	7	5	10	2	24
Purvis	Wildfires	Med	Low	Low	Low	
	Priority Score	35	5	10	2	52
Lumberton	Wildfires	Med	Low	Low	Low	
	Priority Score	35	5	10	2	52
Sumrall	Wildfires	Med	Low	Low	Low	
	Priority Score	35	5	10	2	52

## VII. Preparedness

### A. Organization

#### 1. General

Lamar County developed methods to prepare for natural hazards and transportation accidents. The most widely recognized hazard in the community is the threat of severe weather that produces property damaging winds and flooding. Methods to prepare the community for storm hazards include the following steps:

- Maintaining and improving the drainage system throughout the county

- Informing residents of the potential for storm damage and flooding in the county.
- Adopting and enforcing Flood Plain Damage Prevention Ordinance and Storm Water Management Ordinances and land use regulations
- Cooperating with municipal jurisdictions in the county to mitigate storm damage and other hazards.

## **2. Emergency Management Activities**

Lamar County and its political subdivisions developed the Comprehensive Emergency Management Plan (CEMP), commonly referred to as the “Disaster Plan”. The purpose of the plan is to create mutual aid agreements to perform respective emergency functions before, during and after disasters or emergencies.

The CEMP attempts to be all-inclusive in combining the four phases of emergency management. Those phases are:

- Mitigation: Activities that eliminate or reduce the probability of disaster
- Preparedness: Activities that governments, organizations and individuals develop to save lives and minimize damage
- Response: Activities designed to prevent loss of lives and property and provide emergency assistance in the event of disasters
- Recovery: Short and long term measures that return all systems to normal and improved standards.

Lamar County Emergency Management Agency, located out from Purvis, is charged with promulgation of the CEMP. The CEMP is cognizant to the State's Emergency Operation plan. The agency provides up to date information and an organizational structure to implement emergency programs and disseminate emergency information. During an Emergency, the operation plan dictated the following responsibilities to the Emergency Management office that operates the Emergency Operations Center to which designated department heads report for emergency operations as per the CEMP:

- Development and coordination of an adequate warning system
- Issuing warnings in the event of an emergency situation
- Educating the public regarding the use of the warning system, activating the warning systems and providing manpower during door to door warnings if necessary.

## **B. Community Education**

The Lamar County Emergency Management Agency serves as point for information to be released to the public concerning disasters, along with decisions, suggestions and instructions. The agency is responsible for developing and maintaining public information and education programs. Telephone numbers where the public can obtain official disaster information is published.

The Lamar County Emergency Management Agency provided education to the public through many activities. The director frequently makes presentations to various agencies as requested and residents are welcome to call or visit the Emergency Management office to receive information. Educational brochures and hurricane tracking maps are distributed to the general public and organizations. The Lamar County Emergency Management Agency routinely participates in drills and exercises in the county and in conjunction with State and other local Emergency Management / Civil Defense Agencies in the area.

The local media uses included within the Emergency Management chain of command to disseminate information about weather systems having the potential to cause flooding, tornado activity and other emergency situations. Information includes:

- Continuous situation updates
- Information about evacuation routes and who should evacuate
- Location of shelters
- Preparation and personal protection measures
- Property protection measures
- Road closings
- Location of emergency medical services
- Government, school and business closing due to flooding or other disasters

### **C. Television and Radio Stations**

Residents of the South Mississippi and Lamar County are provided hurricane, flood awareness and other disaster information via local and regional television affiliates. Included are WDAM (NBC - Hattiesburg/Laurel) WHLT (CBS – Hattiesburg/Laurel) WLOX (ABC – Biloxi/Gulfport) throughout the year, and especially at the onset of hurricane season, stations present frequent educational programs about hurricane preparedness. Nearly every station produces at least one documentary feature every year in the subject that is aired during prime time.

Usually the State designates the first week of June as Hurricane Preparedness Week. Special programming focusing on hurricanes and as the problems is presented, as part of the regular newscasts several times daily. Topics include the hazards, safety, precautions, property protection, insurance information and warnings. All major local television stations have sophisticated, up to date equipment for forecasting and predicting severe weather including pinpoint Doppler Radar System. The Doppler system is particularly important in warning the public when tornadoes and severe thunderstorms threaten. Up to the minute reporting is provided any time day or night that the National Weather Service issues severe weather warnings.

The more populated areas of the county are covered by commercial television cable and with affordable satellite service, near unlimited media access is available. In particular, stations like the Weather Channel are invaluable when hurricanes and severe weather threaten.

Public service announcements produced by the Federal Emergency Management Agency and National Flood Insurance Program air during prime time on virtually every major television network. The announcements stress the importance of flood insurance, even for those who have never flooded or do not live in high-risk areas.



Local radio stations play a vital role in dissemination of information during an emergency, especially during the evacuation process when residents are likely to be on the road attempting to flee or return to the area. Information broadcast by radio station at the height of a storm and in the early days after a storm when electric power and cable television service are interrupted is essential to the community attempting to survive and recover from a major storm. An Emergency Information Network has been established in South Mississippi that includes a number of local FM and AM radio stations. During an emergency, normal programming is suspended and public service announcements are broadcast until the emergency subsides or is over. Additional, Lamar County has installed NOAA Weather Radio's in a number of county buildings.

#### **D. Print News Media**

Three newspapers publish local news in Lamar County, The Times, The Independent, and The Hattiesburg American. The Times and The Independent are published weekly and the Hattiesburg American daily out of Hattiesburg, Mississippi. The larger newspapers carry extensive weather related news, especially news and public information concerning flooding, hurricanes, tornadoes and other severe weather affecting the area. At the onset of hurricane season on June 1 each year, extensive coverage is dedicated to hurricanes, preparedness for severe weather and safety steps that can be taken before, during and after a storm.

#### **E. Other Sources**

Local telephone directories include pages in the community information sections concerning emergency preparedness. Telephone numbers are provided for local emergency management / civil defense offices and readers are encouraged to telephone for additional information and answers to specific questions. Telephone numbers to access the Emergency Information Network (EIN), National Weather Service and Hurricane Hotline are also included. The National Weather Service Web site is: [www.srh.noaa.gov/jan/](http://www.srh.noaa.gov/jan/)

**Fire Station Bulletin Boards:** A lesson learned from Hurricane Katrina is that the new sources we depend on daily are not available following a major hurricane or other commonly related disasters. Television stations and radio stations are not in operation and newspapers are not distributed. Land line and cell phone service can be interrupted for days. In the event of communication outages, daily press releases prepared by the federal, state or local authorities will be posted at the fire stations.

**Local Libraries:** In each of the local libraries, is a section of books and guides to assist the public in preparing and repairing, in the event of a flood event. Our paper FIRM Maps can also be found at all locations for the public to view along with contact information of who they should contact with the County regarding the maps and general flood questions. In addition, the libraries offer free internet services for everyone who obtains a library card giving them access to our County website, which offers additional information on any and all hazards/disaster assistance.

## **F. Drainage System Maintenance**

Local public works departments maintain the storm drainage systems in the municipalities of the county. The County Road Department and Public Works Department of the municipalities are staffed with personnel and equipment for maintenance of drainage systems. Each jurisdiction has a drainage system maintenance plan and responds to drainage problems in the area.

Additionally, the county maintains roadside ditches and drainage channels in its jurisdiction. Under the direction of the County Engineer and Road Department Manager, work centers located in each of the county's districts maintain equipment and have personnel whose duty it is to ensure that the drainage system is maintained. During periods of heavy rainfall, county work crews are put into the field to inspect known choke points; clear debris from ditches and ensures that culverts across roadways are open and unobstructed. Debris is removed from all roadside ditches on a regular basis and roadside ditches are mowed several times during the growing season. For additional information, refer to the Lamar County Storm Water Run-Off Ordinance.

## **VIII. Community Goals and Mitigation Actions 201.6(c)(3)(i), 201.6(c)(3)(ii), 201.6(c)(3)(iii), 201.6(c)(3)(iv)**

### **A. Community Goals**

Many hazard related problems that are faced today; drainage, repetitive flooding of homes, erosion, sedimentation, and evacuation are related to rapid growth in Lamar County. Still other hazards are based upon the risk of building and living within a community that is subject to tornadoes and strong straight-line winds. This planning effort provides an opportunity to reduce the exposure of the community to these problems by implementing a plan of action that seeks at its very purpose to make the community more resilient and disaster resistant.

The Jurisdictions created goals that will help reduce or eliminate the vulnerabilities of each jurisdiction. These goals are based on the risk assessment identified in the plan process. The goals of this mitigation plan are listed below:

1. Strategies to reduce death, injury, property damage, infrastructure damage, response costs, and recovery costs.
2. Establish an accessible, comprehensive data network and Geographic Information System (GIS).
3. Provide education and outreach to the general public regarding preparedness and hazard mitigation activities.
4. Establish issue-driven, countywide interaction through networking, shared resources, and avoidance of the duplication of services by cooperative agreement.
5. Establish a Hazardous Material Team and Standard Operating Procedures for addressing hazardous materials situations, including meeting NFPA standards.
6. Establish interagency cooperation and partnerships between the local governments and federal agencies, between local governments and state agencies, and between local governments and the quasi-public and private sectors to reduce damage, and recover quickly from natural hazards.
7. Harden essential facilities and/or county buildings when economically feasible against bombing.

8. Take into account counter-terrorism measures when designing new county buildings and/or essential facilities.
9. Incorporate tornado safe rooms into new county buildings and/or essential facilities.
10. Retrofit existing county buildings and/or essential facilities with tornado safe rooms.
11. Consider the adoption of building and fire codes and the enforcement of codes in order to reduce damage to structures.

## **B. Community Mitigation Actions**

The Council identified mitigation actions that defined skills and tools that could be used throughout each of the jurisdictions to mitigate hazards. These “common” actions include enhancing planning capabilities countywide, developing and sharing specific information across jurisdictional lines, cooperating between local governments and between state agencies, and providing information to individuals. The Council also identified specific actions geared towards specific problems at specific locations.

### **Goal 1: Strategies to reduce death, injury, property damage, infrastructure damage, response costs, and recovery costs.**

#### **1a. Renovate existing public buildings to meet modern standards.**

The jurisdictions will work to make existing public buildings resistant to damage from manmade and natural disasters.

#### **1b. Provide for redundancy in public and infrastructure operations.**

The jurisdictions will work to ensure that their public functions and infrastructure will have the capability to be operational in the event of manmade and natural disasters.

#### **1c. Develop strategies and plans to provide for minimization of damage and disturbance.**

The jurisdictions will develop strategies, plans, and or ordinances to guide development toward low risk areas.

#### **1d. Purchase equipment that will lower response and recovery costs, and accelerate response and recovery time.**

The jurisdictions will prioritize and purchase equipment that will provide for an overall benefit to the community. Important factors are increasing response and recovery time and lowering overall costs.

1e. Provide stock piles of essential items (Establish stockpiles of fuel (gasoline and diesel), N-95 masks, potassium iodine tablets and other commodities that are not readily available and needed during emergencies.)

### **Goal 2: Establish an accessible, comprehensive, countywide data network and Geographic Information System (GIS).**

An accessible and comprehensive county and cities data network will greatly assist efforts to coordinate development within the jurisdictions and to make decisions about new development and the development of new infrastructure within jurisdictions. Shared data will allow local governments and local developers, banks and insurance business to make more informed decisions, and it will assist businesses and residents seeking to determine their risk of being effected by natural disasters. And since data

information is expensive to gather and maintain it will also prove to be cost effective to the four local governments to share in the development of the system.

Lamar County, with the help of the municipalities seeks to create a geographic Information System (GIS) that is comprehensive in land use information that can be retrieved and studied. The county also seeks to make this data accessible to all county departments, all city departments and to residents and businesses operating in Lamar County. The greater the accessibility, the more likely the data will be used in decision making.

The ultimate goal of providing good data is to enhance the amount of information that is available to county and city staff and to residents, developers and business managers within the area so that they can plan for new development, plan for expansions and understand the risks involved in developing at specific locations.

**2a. Update information that is available from the flood insurance maps.**

Lamar County is seeking to be a Cooperative Technical Partner (TCP) with the Federal Emergency Management Agency, tasked to update floodplain information within Lamar County, including mapping base flood elevations. This information is extremely important to residents and property owners within Lamar County. The information gained for this effort will provide up-to-date and accurate maps of Lamar County detailing special flood zones, floodplains and base flood elevations. This increased accuracy can help people make the best possible decisions about building, help the county protect floodplains, help the county understand the impacts of new developments within the floodplain, and finally identify accurate flood zones for insurance purposes.

**2b. To provide easily accessible tax map information to the municipalities in the county, insurance, realtors, banking interests, and individuals.**

Geographic information representing property descriptions, elevation, and location within a flood zone, land uses and ownership should be made accessible by placing this information on either a local network platform or placed on the internet for access by the local governments, banking, real estate and insurance interests working within the county and to individuals. This information is critical to research interests that local governments must make daily in granting and conditioning permits for development, but often the information that they need is not easily accessible. The information will assure that better decisions are made quickly. This information is also important to business interests and individuals that can review this information to weigh the risk of development of property, the types of permits that will be required to develop a parcel of property, or the location of the property in relation to needed infrastructure.

**Goal 3: Provide education and outreach to the general public regarding preparedness and hazard mitigation activities.**

Establish education programs for local government and staff regarding issues related to prevention of disasters, mitigation of damage and recovery. These programs will not only provide an opportunity for networking, but provide information on new programs and technologies available for mitigation as well.

The workshops should include topics on disaster recovery, disaster prevention, hazard mitigation, planning, drainage systems, ecological systems, new construction

techniques, new drainage maintenance techniques, the National Flood Insurance Program, The Community Rating System Program, Federal and State Hazard Mitigation Programs, Continuity planning for local government departments, the interpretation of monitoring data on area streams and rivers, storm water modeling and mapping and technology.

**3a. Provide outreach to the community, including local officials about the Hazard Mitigation Grant Program and requirements for elevation and purchase programs.**

One of the first workshops suggested for the educational programs should be a presentation by the Federal Emergency Agency and the Mississippi Emergency Management Agency on the Hazard Mitigation Grant Program to address repetitive loss properties. Generally, these funds are used to either purchase or remove a repetitive loss property or to elevate the property, based upon a cost-benefit analysis of the property. The program is a voluntary program.

The workshop should be open to local government officials, their staff and the general public. This effort would allow community members to ask specific questions about the application of the program to their problem. It will also assist local government officials to gauge the support within the community of the program, and also assist them with evaluating sources of funds that can be used to match Federal funds.

**3b. Establish a Hazard Mitigation Library at the Library.**

The reduction of damage to property as the result of natural disasters is a goal of the Mitigation Plan. To accomplish this goal, establish a hazard mitigation library in the Lamar County Library System. The materials should include manuals on building within flood prone areas, as well as building in hurricane areas. Most of these materials are available to the county at no or minimal costs from the Federal Emergency Agency and the American Red Cross. These materials can be catalogued and cross-referenced within the card catalogue. The library will provide an excellent centralized location to house these materials.

During Severe Weather Week in February and prior to Hurricane Season, the Office of Emergency Management should work with the Library to insure that these materials are available in the library for used by the public. Besides construction manuals and documents, FEMA and American Red Cross also publish several children's titles, and handbooks on business continuity planning that should be included within this collection. This collection should also include a copy of the plan.

Suggested titles include Coastal Construction Manual, Taking Shelter from the Storm, the Disaster Twins, Business Continuity Planning for Businesses and Industry, and IBHS Continuity Planning for Small Business.

The County's Planning Department and the County's Emergency Management Agency should work with the library to update and expand the offerings of this collection.

**3c. Develop a brochure "Hazards in Lamar County" that will detail natural hazards within the county.**

The brochure will be an educational tool available to all residents of the Jurisdictions which will detail the types of hazard that are prevalent in area, most notably hurricane threats, tornadoes, severe weather and flooding from streams and also storm water

flooding within the county and cities. The brochure will provide safety tips for residents, to help them prepare for hurricanes and severe weather. The brochure should suggest mitigation measures that homeowners can take to secure their homes from the threat of natural disasters.

The brochure can serve three purposes. (1) The brochure can provide outreach for residents living within flood prone areas to help them realize their risks and suggest actions that they can take – such as the purchase of flood insurance. (2) The brochure can also help people prepare for hurricane season and hurricanes. The brochure should suggest actions that residents can take to secure their homes, as well as provide information to people about developing their hurricane plan, which may include evacuation, or securing their homes to wait through the storm. (3) Finally, the brochure should include information on mitigation activities that residents can consider to secure their homes from high winds.

The brochure will be distributed to all new residents. The brochure will be mailed to new residents after they receive their E-911 Serial number.

### **3d. Establish a Speakers Forum.**

The Jurisdictions have many active social and civic organizations. Churches also provide an opportunity for residents to learn actions that can mitigate and prevent the loss of life and reduce the damage to property. It is recommended that the Lamar County Emergency Management Agency establish a Speaker's Forum, update this listing yearly, and provide this listing to the County's social, civic and spiritual organizations. This would provide a list of available speakers to these organizations.

It is suggested that this list include speakers such as the County Emergency Management Director, the Hurricane Forecaster for MEMA, the Hazard Mitigation Specialist for MEMA, the Transportation Planner for MEMA, the Chief Forecaster from the National Weather Service in Jackson, and Weathercasters from local radio stations in Biloxi, Hattiesburg and New Orleans.

It is suggested that this listing of speakers be updated yearly to reflect personnel changes, and new staff representing new missions within the organizations. It is also suggested that this updated list be mailed to all organizations within Lamar County each year.

### **3e. Establish a Hazard Mitigation and Disaster Preparedness Booth at festivals.**

The Cities in Lamar County host festivals each year. Each festival provides an opportunity to provide education and outreach to a large portion of the region's population.

It is recommended that the Lamar County Emergency Management Agency establish a booth at each festival. The intent is to provide materials to participants of the festival and to be available to answer questions about preparedness and mitigation. These venues will allow residents to ask questions and gather materials. It is suggested that the materials at the festivals stress hurricane and tornadoes, windstorms and severe thunderstorms.

### **3f. Encourage the Chambers and Emergency Management to develop a program on Business Continuity Planning for Businesses.**

The U.S. Small Business Administration indicated that 43% of small businesses that are forced to close due to a disaster never re-open. The SBA believes that another 29% of small businesses close within 2 years of disaster. In Lamar County and the jurisdictions, approximately 77% of the businesses within the county employ less than 10 people. These businesses are particularly vulnerable to closures and disasters. Many lack the resources to compensate for time closed due to the disaster and many may lack the knowledge to develop continuity plans for their businesses.

It is recommended that The Area Development Partnership and Lamar County Emergency Management Agency establish a program to present business continuity planning information to businesses within Lamar County. The Institute of Business and Home Safety provides a curriculum designed specifically for small businesses. IBHS provides train the trainer workshops, allowing the County's business community to make an investment in the knowledge to develop small business continuity plans.

**3g. Host a luncheon for school principals to showcase educational materials that are available to teachers.**

It is recommended that the Lamar County Emergency Management Agency host a luncheon each year to introduce new educational materials for children on natural hazards to school principals and school and county librarians. The Federal Emergency Management Agency and the American Red Cross have developed unique and very effective materials that can be incorporated into the school's existing curriculum and can be used to enhance the existing curriculum. Such programs as the American Red Cross' and Allstate Insurance's Masters of Disaster offer lessons in language arts, math, and science related to disaster preparedness for children.

It is recommended that copies of the materials are available at the luncheon, as well as having a field representative from American Red Cross, FEMA or MEMA available to provide ideas on using the materials within the classroom.

**Goal 4: Establish issue-driven, countywide interaction through networking, shared resources, and avoidance of the duplication of services by cooperative agreement.**

**4a. Establish quarterly meetings between the Board of Supervisors and the three (3) City Governments.**

The Lamar County Board of Supervisors, the Mayor and City Aldermen of Lumberton, Purvis, and Sumrall should continue to meet on a quarterly basis to promote countywide programs that share resources and avoid the duplication of services. The monthly meetings should have a set agenda to discuss specific issues facing the county.

At least once a year, on the agenda of the meeting should be an overview of the standard operating procedures for hurricane response and other emergencies within the County. This program should be introduced at the meeting immediately before the start of hurricane season. At this meeting, an overview of FEMA's Hazard Mitigation program should be prepared and progress should be measured on the success of the program to remove repetitive losses in Lamar County.

**Goal 5: Establish a Hazardous Materials Team and Standard Operating Procedures to address hazardous spills within the County.**

Transportation infrastructure in Lamar County is part of a national system that serves most major cities within the Southeast. Rail lines that lie within Lamar County originate in New Orleans and provide rail access to such major southern cities as Birmingham, Alabama and Atlanta, Georgia. U.S. Interstate 59 provides access from the New Orleans region to the Atlanta area. Average daily traffic on Interstate 59 was estimated to be 33,000 vehicles in the year 2000. Hazardous materials are moved through Lamar County by both rail and by highway. Lamar County has approximately 19 facilities that are listed as hazardous material handlers by the U.S. Environmental Protection Agency.

**5a. The Emergency Management Director, the Volunteer Fire Departments, Lamar County Fire Services and the Municipal Fire Departments will develop a Hazardous Materials Response Team through an inter-local agreement.**

Increasing population and economic growth within Lamar County, as well as increased rail and truck traffic is creating a greater risk of an accident involving hazardous materials. The county has formed a Hazardous Material Team to respond to these incidents.

Training, equipping and maintaining a Hazardous Materials Team is an expensive endeavor. Therefore, it is recommended that this effort be a cooperative program established by the County Board of Supervisors and the Cities of Lumberton, Purvis and Sumrall. This would allow for shared staffing, shared equipment and shared training. Currently, grants from the Department of Homeland Security have purchased most of the equipment and the Team has a procedure in place to bill the responsible party for the equipment used at the incident. In the event of no responsible party, Department of Environmental Quality (DEQ) may reimburse the Team expense, if the right procedures were followed.

The drafting and the adoption of an Inter-local Agreement between the three local governments must precipitate the establishment of the Team. That inter-local agreement should determine the amount of staffing from each entity, the ownership of equipment, and the fiscal agent for the Team, how revenues from grants and reimbursements will be accounted for and spent, and how property purchased by the Team will be owned.

Bring and maintain the Hazardous Materials Team into compliance with NFPA guidelines including NFPA 1582 (Physicals and Vaccinations)

**5b. A written plan and standard operating procedures will be developed and incorporated into the County's CEMP (Comprehensive Emergency Management Plan).**

Prior to adopting the inter-local agreement, the county and municipalities should draft standard operating procedures to respond to hazardous materials incidences that may involve the transporting of hazardous materials by air, rail and roadways through Lamar County. The team should also draft response procedures for the hazardous materials leakages from Lamar County businesses that are air-borne and water borne, as well as land borne.



These response and recovery procedures should be documented and incorporated in the County's CEMP and adopted by the Board of Supervisors, Lumberton, Purvis and Sumrall.

**5c. The Hazardous Materials Team will receive regular training to maintain certification.**

The Hazardous Materials Team has received certification in the handling of materials and completes continuing education classes annually to maintain their certifications. Currently, grants have funded the certification and continuing education of the team members. The minimum certification and training requirements will be outlined in the Hazardous Material Emergency Response Team Membership Policy.

**Goal 6: Establish interagency cooperation and partnerships between the local governments, between local governments and federal agencies, between local governments and state agencies, and between local governments and the quasi-public and private sectors to reduce damage, and recover quickly from natural hazards.**

**6a. Establish a formal policy to invite county/city staff to attend site plan review for projects that are immediately adjacent to the jurisdiction or will impact the jurisdiction.**

It is recommended that a memorandum of understanding be adopted and a policy defined to establish extra-territorial review of proposed development projects during the site plan review process of both cities and the county for developments that lie either adjacent to the jurisdictional boundaries or within a drainage sub-basin. This could insure a comprehensive review of the developments that may cause flooding within the watershed.

**6b. Cooperate with Mississippi Department of Transportation to establish pre-disaster policies on maintenance of the right of way.**

The Hazard Mitigation Council cited Interstate 59, U.S. Highway 98 and U.S. Highway 11 as critical thoroughfares in Lamar County. These roadways were not only critical for evacuation purposes, but also are important to response and recovery actions after natural disasters occur. During windstorms, tornadoes, severe thunderstorms and tropical weather including hurricanes, all of these roadways are subject to downed tree limbs and trees that block the roadways. Having to close the highway can create safety hazards, as well as delay response actions, and slow recovery.

It is recommended that the Lamar County Board of Supervisors request that the Mississippi Department of Transportation take a more proactive stance to mitigation, by establishing maintenance procedures that identify dead and dying trees and limbs along these three roadways and remove these trees and limbs, as well as trim trees and limbs to prevent the limbs and trees from falling during natural hazard events.

**Goal 7: Consider the adoption of building and fire codes and the enforcement of codes in order to reduce damage to structures.**

One of the best tools that a community can utilize to mitigate the damage of natural disasters is the adoption of minimum standards for the construction of buildings. It is recommended that the Lamar County Board of Supervisors consider adopt building codes and provide training and staffing to implement building codes within the county and to utilize code enforcement officers, adequately educate contractors, and enforce the building code.

**7a. Adopt building codes and minimum standards applied to the construction or reconstruction of buildings to insure public health, welfare, and safety. A community can adopt minimum standards that determine how a building should be constructed.**

“Model” codes have been developed for communities to consider in their adoption. There are four “model” codes that apply across the country. In 1999, each of the Code Congresses took steps to adopt one set of model codes, the International Building Code. The International Building Code was completed and ready for adoption in 2000. The International Code Congress is also responsible for publishing the One and Two Family Dwelling Code that is included as an appendix in the Uniform Building Code and the Southern Building Code.

The Cities of Purvis, Lumberton, and Sumrall adopted a Standard Building Code developed by the Southern Building Code Congress International. The cities maintain staff to implement and enforce the building code within their municipal limits. The Lamar County Board of Supervisors has not adopted a building code, but they have adopted a process to apply for a flood permit to build. The permit allows the county to maintain a record of new buildings and allows the county to enforce the floodplain ordinance.

The purpose for the adoption of building codes is to provide safer structures that reduce deaths and property damage that result due to the failure of the building or its systems. Building codes insure that there is minimum structural integrity to the building and that the building can perform to certain standards to withstand natural disasters. Besides saving lives and reducing property damage, the adoption of minimum standards for buildings helps to reduce the amount of public and private disaster aid after a natural disaster, if not for the implementation of building codes; and the adoption of building codes helps to preserve the built environment and property values.

In addition to considering adoption of the International Building Code, the Lamar County Board of Supervisors should consider adopting the Standard for Hurricane Resistant Residential Construction published by the Southern Building Code Congress International or adopt SSPD-1099, which is part of the International Building Code. These standards provide performance standards for residential structures under a specified wind pressure defined by wind zones.

Minimum standards provide a certain level of comfort for homeowners. There is an assurance of a certain minimum standard of construction. Most homeowners seek this comfort level when they purchase a home. A study by the Institute for Business and Home Safety indicated that 91% of homeowners that lived in coastal areas prone to hurricanes believed that builders should follow stricter building codes. Homeowners

indicate that they would assume additional costs of as much as \$5,000 for a \$100,000 home to have a safer home.

**7b. Adopt similar enforcement procedures between the county and cities, and consider shared staff to reduce costs and insure consistent enforcement.**

Consistency in the implementation and the enforcement of building codes will insure that contractors in Lamar County successfully follow the codes. For this reason it is recommended that similar model codes be adopted and that enforcement of the codes is a shared responsibility between the four local governments. Shared staff will insure consistent enforcement within the county, and can create an economy of scale that will provide better service to county residents and contractors and reduce costs.

Continue to use Insurance Rebate Code Funding to have firefighters attend the Mississippi Fire Academy to receive NFPA 1031 Fire Inspector Certification.

**7c. Adopt and implement a regulation requiring building owners to retrofit their structures for flood damage, if the structure's insured loss exceeds 50% or more of the structure's value.**

The National Flood Insurance Program requires retrofitting to reduce flood damage when losses exceed 50% of the property's value. If the cost to repair a flood damage building exceeds 50% of the fair market value of the home, then the building must be rebuilt in compliance with the Flood Ordinance. This will be an essential tool to reduce flood losses in the county, and is implemented through our Flood Damage Prevention Ordinance.

**C. Community Mitigation Projects**

The Lamar County Hazard Mitigation Council established a ranking system associated with each Mitigation Project. All projects were given equal weight to create a priority score for the Mitigation Project List. The ranking system includes a cost/benefit review for a five year time period as well as social, technical, administrative, political, legal, and environmental considerations. Each action was given a +1 for a favorable factor, and a 0 for a non-favorable factor. A sample Cost/Benefit review is attached as appendix 2.

The Lamar County Hazard Mitigation Council prioritized and established the following projects that are felt will help to reduce the affects of a disaster in each jurisdiction:

Table 17

STAPLEE Criteria Considerations Actions/Projects	S		T			A			P			L			E					E
	Social		Technical			Administrative			Political			Legal			Environmental					Economic
	Community Acceptance	Effect on Segment of Population	Technical Feasibility	Long-Term Solution	Secondary Impacts	Staffing	Funding Allocated	Maintenance/Operations	Political Support	Local Champion	Public Support	State Authority	Existing Local Authority	Potential Legal Challenge	Effect on Land/Water	Effect on Endangered Species	Effect on HAZMAT/Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws	from Benefit/Cost Review (insert total plusses from worksheet)
<b>Lamar County</b>																				
Generators	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	3
Repetitive Loss Buy Out Program	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1	3
Old Courthouse Renovations	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	1
Communication Towers	1	1	1	1	1	0	0	1	1	0	1	0	0	1	1	1	1	1	1	3
EMD Building	1	1	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	1	1	1
<b>Town of Sumrall</b>																				
Fire Truck	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	2
Generators	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	2
5X8 culverts	1	0	0	1	1	1	1	1	1	0	1	0	0	1	1	1	1	1	1	3
<b>City of Purvis</b>																				
Generators	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	3
Truck with knuckle boom	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	2
<b>City of Lumberton</b>																				
Fire Truck	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	2
Generators	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	2
Dump Trucks	1	1	1	0	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	2

The Council was concerned with planning for the future and planning to create a more resilient community. The diversity of the county suggests that multi-jurisdictional planning could leverage the intellectual capital of the community and share community resources to make the community resilient to disasters.

The ultimate aim is to insure that new developments do not create hazardous situations for existing homes, business and infrastructure. This effort will not only create a safer, resilient place to live and work, but can also reduce costs to local governments to retrofit infrastructure and also reduce potential public assistance costs associated with damages from natural disasters.

Among the goals and actions defined by the Council that will promote proactive planning to guide growth and make the community more resilient is:

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** All Hazards

**Jurisdiction:** Lamar County

**Project Contact:** Tara Coggins or Chuck Bennett

**Title:** Associate County Planner or County Administrator

**Agency:** Lamar County

**Address:** P.O. Box 1240 Purvis, MS 39475

**Phone No.** 601-794-8504

**Email:** tlcoggins@lamarcounty.com or cbennett@lamarcounty.com

### **Describe the Mitigation Project or Action:**

Lamar County has a need for three heavy duty generators in order to continue to operate the main hub of county operations buildings in Purvis. In addition, three more generators will be needed to operate the one existing communications tower, and two proposed communications towers in the event of a disaster that causes prolonged interruption in power supply to the existing communications towers

**Timeline:** Completed

**Location of Project:** Lamar County

**Total Estimated Cost (ballpark figure):** \$200,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Flood

**Jurisdiction:** Lamar County

**Project Contact:** Tara Coggins, CFM

**Title:** Associate County Planner

**Agency:** Lamar County

**Address:** P.O. Box 1240 Purvis, MS 39475

**Phone No.** 601-794-1024

**Email:** tlcoggins@lamarcounty.com

**Describe the Mitigation Project or Action:**

Lamar County has a large repetitive flood loss area near the Hattiesburg City limits in the Westover Subdivision. This neighborhood was developed Pre-FIRM and has multiple flood losses. The county would like to alleviate these flood losses through a buy out program.

**Timeline:** 3 - 9 months, depending on closing dates, **Ongoing**

**Location of Project:** Westover Subdivision

**Total Estimated Cost (ballpark figure):** \$500,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, Historical Building Grants.

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Hurricane, Thunderstorm

**Jurisdiction:** Lamar County

**Project Contact:** Chuck Bennett

**Title:** County Administrator

**Agency:** Lamar County

**Address:** P.O. Box 1240 Purvis, MS 39475

**Phone No.** 601-794-8504

**Email:** cbennett@lamarcounty.com

**Describe the Mitigation Project or Action:**

Lamar County's Circuit Court building was built in 1905 and renovated in 1934. Recent storm and hurricane events have shown that the building is in need of renovation to meet structural wind requirements and restoration of the internal structure from water damage due to heavy downpours.

**Timeline:** Completed - Grand Opening is to be held on April 4, 2013

**Location of Project:** Lamar County

**Total Estimated Cost (ballpark figure):** \$4,000,000.00

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, Historical Building Grants.

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** All Hazards

**Jurisdiction:** Lamar County

**Project Contact:** James Smith

**Title:** Emergency Management Director

**Agency:** Lamar County

**Address:** P.O. Box 1240 Purvis, MS 39475

**Phone No.** 601-794-8504

**Email:** jsmith@lamarcounty.com

**Describe the Mitigation Project or Action:**

The County currently does not have any method of providing information dissemination to the public during and following disasters. Lamar County's ability to transmit information in various locations depending on the scope of the disaster, the response and needs is imperative in the County as it continues to grow. The obtaining of trailer mobile variable message boards is paramount to be able to provide area specific details in a message to the public. Due to the significant amount of transient persons as well which evacuate from the coastal region in addition to our normal population we have found that we could be double in population straining our services. We are looking at obtaining at least 10 trailer message boards and possibly more depending on evaluation of needs. These trailers would be available for all hazard incidents.

**Timeline:** 6-12 months, upon approval for initial 10

**Location of Project:** Lamar County

**Total Estimated Cost (ballpark figure):** \$200,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, private investments, fire grants



## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** All Hazards

**Jurisdiction:** Lamar County

**Project Contact:** James Smith or Chuck Bennett

**Title:** Emergency Management Director or County Administrator

**Agency:** Lamar County

**Address:** P.O. Box 1240 Purvis, MS 39475

**Phone No.** 601-794-8504

**Email:** jsmith@lamarcounty.com or cbennett@lamarcounty.com

**Describe the Mitigation Project or Action:**

The Emergency Management building is an inadequate facility for the needs of the Emergency Management Department. The structure is not secure, does not have shelter for employees during emergency situations, and it has insufficient space to for the needs of the department during emergency situations. In addition, the building is located in a rural area far away from the hub of critical infrastructure such as major transportation thoroughfares, power, water, sewer, high-speed internet, and telephone. The location is nearly impossible to reach by cellular phone. To help alleviate some of these problems, Lamar County would like to construct a new Emergency Management building and within the facility add emergency dispatch and the county telephone system.

**Timeline:** 6 – 9 Months, upon approval, **Ongoing**

**Location of Project:** Lamar County

**Total Estimated Cost (ballpark figure):** \$1,000,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** All Hazards

**Jurisdiction:** Sumrall

**Project Contact:** Gerolene Rayborn and Joann Robbins

**Title:** Mayor or City Clerk

**Agency:** Town of Sumrall

**Address:** 4880 Hwy 589 Sumrall, MS 39482

**Phone No.** 601-758-3591

**Email:** townofsumrall@gmail.com

**Describe the Mitigation Project or Action:**

Infrastructure (Bridge on Center Ave) has been declared unsafe for traffic and has been temporarily closed until funds are available to make the repairs. It appears that the project plans from the US Army Corp of Engineers included installation of a large box culvert that would be sufficient to carry the water and avoid the downtown flooding. The school buses have to detour to avoid this bridge for the safety of the children. Also, it could be a major problem and hindrance, in the event of an emergency response.

**Timeline:** 6-9 months, upon approval

**Location of Project:** Center Ave in Sumrall, MS

**Total Estimated Cost (ballpark figure):** \$500,000

**Source(s) of Funding:** In-Kind Services, state grants to use toward the matching share, CDBG Grants, Homeland Security Grants, private investors

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** All Hazards

**Jurisdiction:** Sumrall

**Project Contact:** Gerolene Rayborn and Joann Robbins

**Title:** Mayor or City Clerk

**Agency:** Town of Sumrall

**Address:** 4880 Hwy 589 Sumrall, MS 39482

**Phone No.** 601-758-3591

**Email:** townofsumrall@gmail.com

### Describe the Mitigation Project or Action:

Sumrall currently has a 30 year-old generator that is used for back-up power for water supply. Currently, emergency situations call for the generator to be transported between the sewer station and water station. Sumrall would like to purchase two generators, one to replace the old generator for the water supply station and purchase another generator with an exercise timer and automatic change over for the lift station. These actions are critical in supplying water and sewage services during emergency situations.

A mobile trailer generator with a timer and automatic changeover have been purchased and placed at the water supply station and the current 30-year old generator is now permanently located at the lift station. Sumrall would still like to be able to purchase a new generator to replace the old one if offered at any time.

**Timeline:** 2 - 3 months, upon approval, **Ongoing**

**Location of Project:** Lift station at 5 Preston St. and water station at intersection of Poplar St. and Water Ave, in the Town of Sumrall

**Total Estimated Cost (ballpark figure):** \$108,000

**Source(s) of Funding:** in-kind services, state grants, private investors, CDBG Grants

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Flood

**Jurisdiction:** Sumrall

**Project Contact:** Gerolene Rayborn and Joann Robbins

**Title:** Mayor or City Clerk

**Agency:** Town of Sumrall

**Address:** 4880 Hwy 589 Sumrall, MS 39482

**Phone No.** 601-758-3591

**Email:** townofsumrall@gmail.com

**Describe the Mitigation Project or Action:**

Infrastructure protection measures are needed along Hwy 42 and Hwy 589 near the Sumrall City Hall. Currently there are culverts under these roadways that are causing a bottleneck effect which is causing water to back up over the roadway and into residential and commercial buildings. There have been numerous occasions where the City Hall and five nearby businesses have been flooded with approximately four to six inches of water. The Town of Sumrall would like to replace these with 25 5 x 8 concrete box culverts.

**Timeline:** 6 – 9 months, upon approval, **Ongoing**

**Location of Project:** HWY 42 west of the four - way stop; Hwy 589 near City Hall

**Total Estimated Cost (ballpark figure):** \$500,000

**Source(s) of Funding:** in-kind services, state grants to use toward the matching share, CDBG Grants, Homeland Security Grants, private investors

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** All Hazards

**Jurisdiction:** Purvis

**Project Contact:** Sheila Speights

**Title:** City Clerk

**Agency:** City of Purvis

**Address:** P.O. Box 308 Purvis, MS 39475

**Phone No.** 601-794-2472

**Email:** purviscityclerk@bellsouth.net

**Describe the Mitigation Project or Action:**

Purvis has a need for six heavy duty generators. These are needed in order to continue to operate City Hall/Police Department, Fire Department, Public Works Building, sewer lagoon, water supply station, and several lift stations in the event of prolonged power outage as found with the many Hurricanes and Storm systems that damage power supply to the area.

A generator has been purchased for the sewer lagoon and the water supply station for the School St. location.

**Timeline:** 3 - 6 months, upon approval, **Ongoing**

**Location of Project:** Purvis City Hall, Sewer System, Water system

**Total Estimated Cost (ballpark figure):** \$250,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, Private Investment

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Flood

**Jurisdiction:** Purvis

**Project Contact:** Sheila Speights

**Title:** City Clerk

**Agency:** City of Purvis

**Address:** P.O. Box 308 Purvis, MS 39475

**Phone No.** 601-794-2472

**Email:** purviscityclerk@bellsouth.net

**Describe the Mitigation Project or Action:**

The City of Purvis has minimal property that lies within a Special Flood Hazard Area and no structures that lie within these areas. In order to stay in compliance with the NFIP, The City of Purvis has entered into an inter- local agreement with Lamar County to have the County Floodplain Manager administer their Ordinance. The duties of the County Floodplain Manager are to issue all flood permits and keep a record of all permits, as well as, keep all of the City's maps and Flood Ordinance current .

The Inter-local agreement will remain in effect until such time that the City sees fit to discontinue this effort.

**Timeline:** Ongoing

**Location of Project:** City of Purvis

**Total Estimated Cost (ballpark figure):**

**Source(s) of Funding:**

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Hurricane, Windstorms

**Jurisdiction:** Purvis

**Project Contact:** Sheila Speights

**Title:** City Clerk

**Agency:** City of Purvis

**Address:** P.O. Box 308 Purvis, MS 39475

**Phone No.** 601-794-2472

**Email:** purviscityclerk@bellsouth.net

**Describe the Mitigation Project or Action:**

The City of Purvis has a need for a truck with an attached knuckle boom. After hurricanes and windstorms, heavy debris across roadways is very problematic for first responders. The purchase of a truck with an attached knuckle boom will allow the city to expedite the process for opening the roads back up for first responders and general transportation of goods and supplies.

**Timeline:** 3 - 6 months, upon approval, **Ongoing**

**Location of Project:** City of Purvis

**Total Estimated Cost (ballpark figure):** \$120,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, Private Investment

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Flood

**Jurisdiction:** Lumberton

**Project Contact:** Stephanie Mullings

**Title:** City Clerk

**Agency:** City of Lumberton

**Address:** P.O. Box 211, Lumberton, MS 39455

**Phone No.** 601-796-7003

**Email:** lumbertoncityclerk@hotmail.com

**Describe the Mitigation Project or Action:**

The City of Lumberton has minimal property that lies within a Special Flood Hazard Area and no structures that lie within these areas. In order to stay in compliance with the NFIP, The City of Lumberton has entered into an inter- local agreement with Lamar County to have the County Floodplain Manager administer their Ordinance. The duties of the County Floodplain Manager are to issue all flood permits and keep a record of all permits, as well as, keep all of the City's maps and Flood Ordinance current .

The Inter-local agreement will remain in effect until such time that the City sees fit to discontinue this effort.

**Timeline:** Ongoing

**Location of Project:** City of Lumberton

**Total Estimated Cost (ballpark figure):**

**Source(s) of Funding:**



## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Wildfire, Manmade

**Jurisdiction:** Lumberton

**Project Contact:** Stephanie Mullings

**Title:** City Clerk

**Agency:** City of Lumberton

**Address:** P.O. Box 211, Lumberton, MS 39455

**Phone No.** 601-796-7003

**Email:** lumbertoncityclerk@hotmail.com

**Describe the Mitigation Project or Action:**

The city currently has one fire/pumper truck that is old and in need of replacement. The city would like to replace the existing one with a newer model. This will help alleviate wildfire problems in addition to man made problems associated with Interstate traffic accidents and common house/business fires.

**Timeline:** Completed

**Location of Project:** City of Lumberton

**Total Estimated Cost (ballpark figure):** \$250,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, private investments, fire grants

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** All Hazards

**Jurisdiction:** Lumberton

**Project Contact:** Stephanie Mullings

**Title:** City Clerk

**Agency:** City of Lumberton

**Address:** P.O. Box 211, Lumberton, MS 39455

**Phone No.** 601-796-7003

**Email:** lumbertoncityclerk@hotmail.com

**Describe the Mitigation Project or Action:**

The city currently has one existing generator that is old and in need of replacement. It is used to keep the police department running during emergency events. The city needs 8 new heavy duty generators to keep the city's critical functions operating during a disaster event. The generators will be used for operation of public buildings, fire station, police station, city hall, city barn, water system, lagoon, and lift stations.

**Timeline:** 3 - 6 months, **Ongoing**

**Location of Project:** public buildings, fire station, police station, city hall, city barn, water system, lagoon, and lift stations

**Total Estimated Cost (ballpark figure):** \$320,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, private investments

## Mitigation Actions and/or Projects Worksheet

**HAZARD (mitigated):** Hurricane, Thunderstorm, Windstorm, and Tornado

**Jurisdiction:** Lumberton

**Project Contact:** Stephanie Mullings

**Title:** City Clerk

**Agency:** City of Lumberton

**Address:** P.O. Box 211, Lumberton, MS 39455

**Phone No.** 601-796-7003

**Email:** lumbertoncityclerk@hotmail.com

**Describe the Mitigation Project or Action:**

The city currently has one existing dump truck that is old and in need of replacement. Because of the excessive amounts of debris related to storms of all nature the city is in need of two dump trucks.

**Timeline:** 3 - 6 months, Ongoing

**Location of Project:** City of Lumberton

**Total Estimated Cost (ballpark figure):** \$150,000

**Source(s) of Funding:** CDBG Grants, State Emergency Management Grants, private investments

# *Appendices*

## *Appendix 1*

### Hazard Mitigation Council

- Mr. Michael Hershman - Lamar County Planner
- Mrs. Tara Coggins - Lamar County Associate Planner
- Mr. Brian Neuman - Lamar County Development Official
- Mr. James Smith - Lamar County Emergency Management Director
- Mr. George Stevens - Lamar County Fire Coordinator
- Mr. Danny Rigel - Lamar County Sheriff
- Ms. Sheila Speights - Purvis City Clerk
- Ms. Stephanie Mullings - Lumberton City Clerk
- Mayor Gerolene Rayborn - Mayor of Sumrall
- Mr. Chuck Bennett - Lamar County Administrator
- Mr. Donald Walker - Lamar County Engineer

# *Appendix 2*

## BENEFIT / COST REVIEW

### Supplement to STAPLE + E Worksheet

Jurisdiction: \_\_\_\_\_

Hazard: \_\_\_\_\_

Project: \_\_\_\_\_

Economic Review Considerations	Plus (+)	Minus (-)
1. Are there currently sources of funds that can be used to implement the action?		
2. Does the cost seem reasonable for the size of the problem and likely benefits?		
3. Will the tax base or local economy be significantly burdened by this action?		
4. Does the action contribute to other community economic goals, such as capital improvements or economic development?		
5. Provide a ballpark estimate:  Damage prevented by proposed action (one event): \$ _____  times number of events: x _____ equals:  Total: \$ _____  Estimated Project Cost: \$ _____  If these two costs, when compared to each other, show a financial advantage with the proposed action, then note a (+) in the column. If not, then note a (-).		
<b>TOTAL</b>		

### *Appendix 3*

*Windstorms/Thunderstorms Events and locations*

Location or County	Date	Time	Type	Mag	Dth	Inj	PrD	CrD
<a href="#"><u>136. Countywide</u></a>	12/4/2005	11:46 PM	Tstm Wind					
<a href="#"><u>137. Countywide</u></a>	12/4/2005	4:14 PM	Tstm Wind					
<a href="#"><u>138. Countywide</u></a>	2/3/2006	12:15 PM	Tstm Wind					
<a href="#"><u>139. Countywide</u></a>	4/21/2006	11:00 AM	Tstm Wind					
<a href="#"><u>140. Countywide</u></a>	4/21/2006	2:25 PM	Tstm Wind					
<a href="#"><u>141. Countywide</u></a>	5/8/2006	7:57 PM	Tstm Wind					
<a href="#"><u>142. Countywide</u></a>	5/8/2006	8:02 PM	Tstm Wind					
<a href="#"><u>143. Countywide</u></a>	5/8/2006	8:18 PM	Tstm Wind					
<a href="#"><u>144. Countywide</u></a>	5/8/2006	8:45 PM	Tstm Wind					
<a href="#"><u>145. Countywide</u></a>	5/9/2006	10:25 AM	Tstm Wind					
<a href="#"><u>146. Countywide</u></a>	5/10/2006	8:25 PM	Tstm Wind					
<a href="#"><u>147. Countywide</u></a>	5/10/2006	10:00 PM	Tstm Wind/Hail					
<a href="#"><u>148. Countywide</u></a>	5/24/2006	6:05 PM	Tstm Wind					
<a href="#"><u>149. Countywide</u></a>	5/24/2006	6:35 PM	Tstm Wind					
<a href="#"><u>150. Countywide</u></a>	6/23/2006	4:02 PM	Tstm Wind/Hail					
<a href="#"><u>151. Countywide</u></a>	6/23/2006	5:30 PM	Tstm Wind/Hail					
<a href="#"><u>152. Countywide</u></a>	6/23/2006	6:00 PM	Tstm Wind/Hail					
<a href="#"><u>153. Countywide</u></a>	7/16/2006	3:04 PM	Tstm Wind					
<a href="#"><u>154. Countywide</u></a>	7/19/2006	2:00 PM	Tstm Wind/Hail					
<a href="#"><u>155. Countywide</u></a>	7/19/2006	4:10 PM	Tstm Wind/Hail					
<a href="#"><u>156. Countywide</u></a>	8/5/2006	2:44 PM	Tstm Wind					

<a href="#"><u>157. Countywide</u></a>	1/4/2007	12:00 AM	Tstm Wind					
<a href="#"><u>158. Countywide</u></a>	2/13/2007	5:22 AM	Tstm Wind					
<a href="#"><u>159. Countywide</u></a>	3/1/2007	4:17 PM	Tstm Wind					
<a href="#"><u>160. Countywide</u></a>	4/14/2007	7:10 AM	Tstm Wind					
<a href="#"><u>161. Countywide</u></a>	4/14/2007	1:49 PM	Tstm Wind					
<a href="#"><u>162. Countywide</u></a>	5/3/2007	11:24 AM	Tstm Wind					
<a href="#"><u>163. Countywide</u></a>	5/11/2007	5:32 PM	Tstm Wind					
<a href="#"><u>164. Countywide</u></a>	5/11/2007	6:36 PM	Tstm Wind					
<a href="#"><u>165. Countywide</u></a>	6/9/2007	1:31 PM	Tstm Wind					
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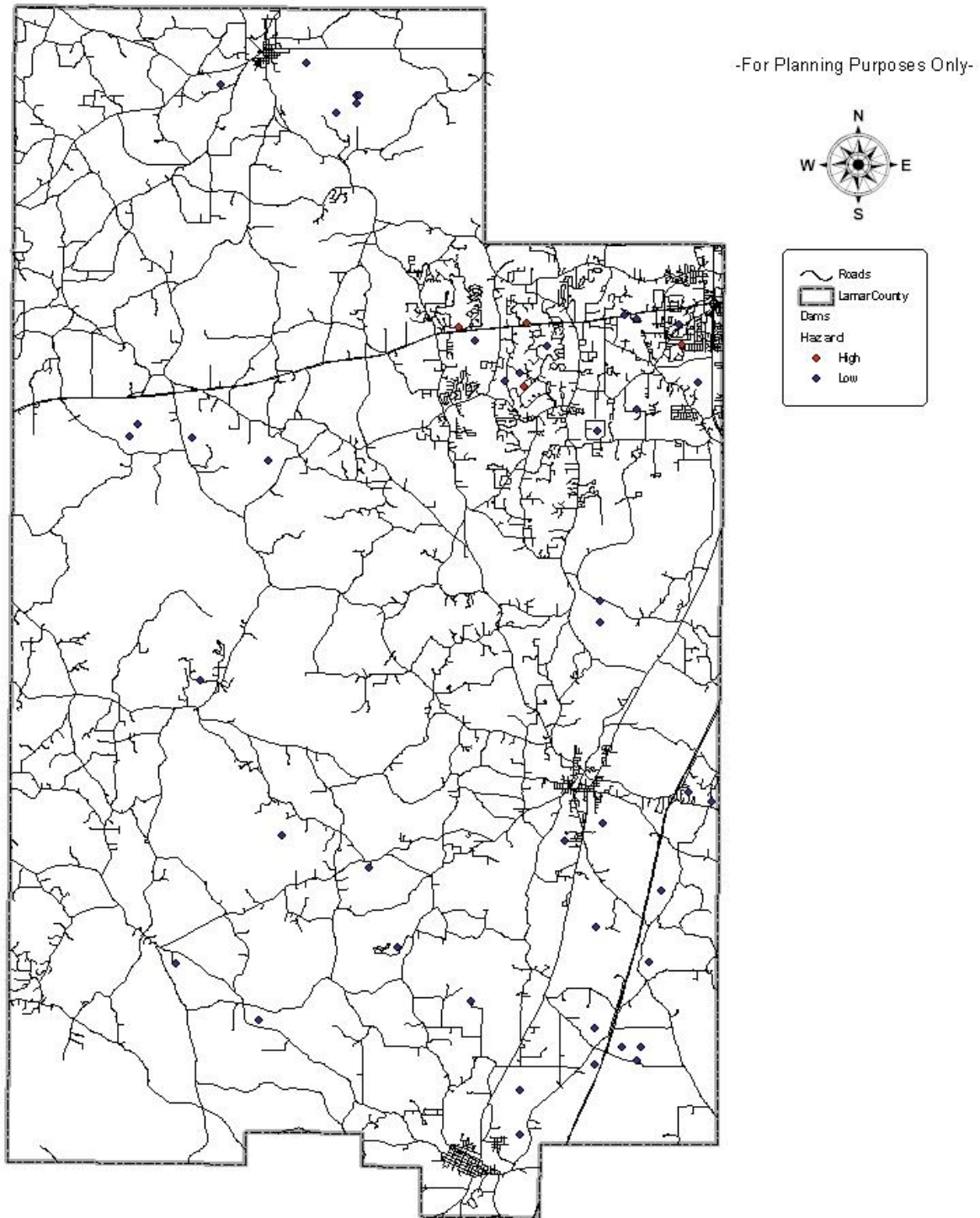


# LAMAR COUNTY CRITICAL FACILITIES MAP



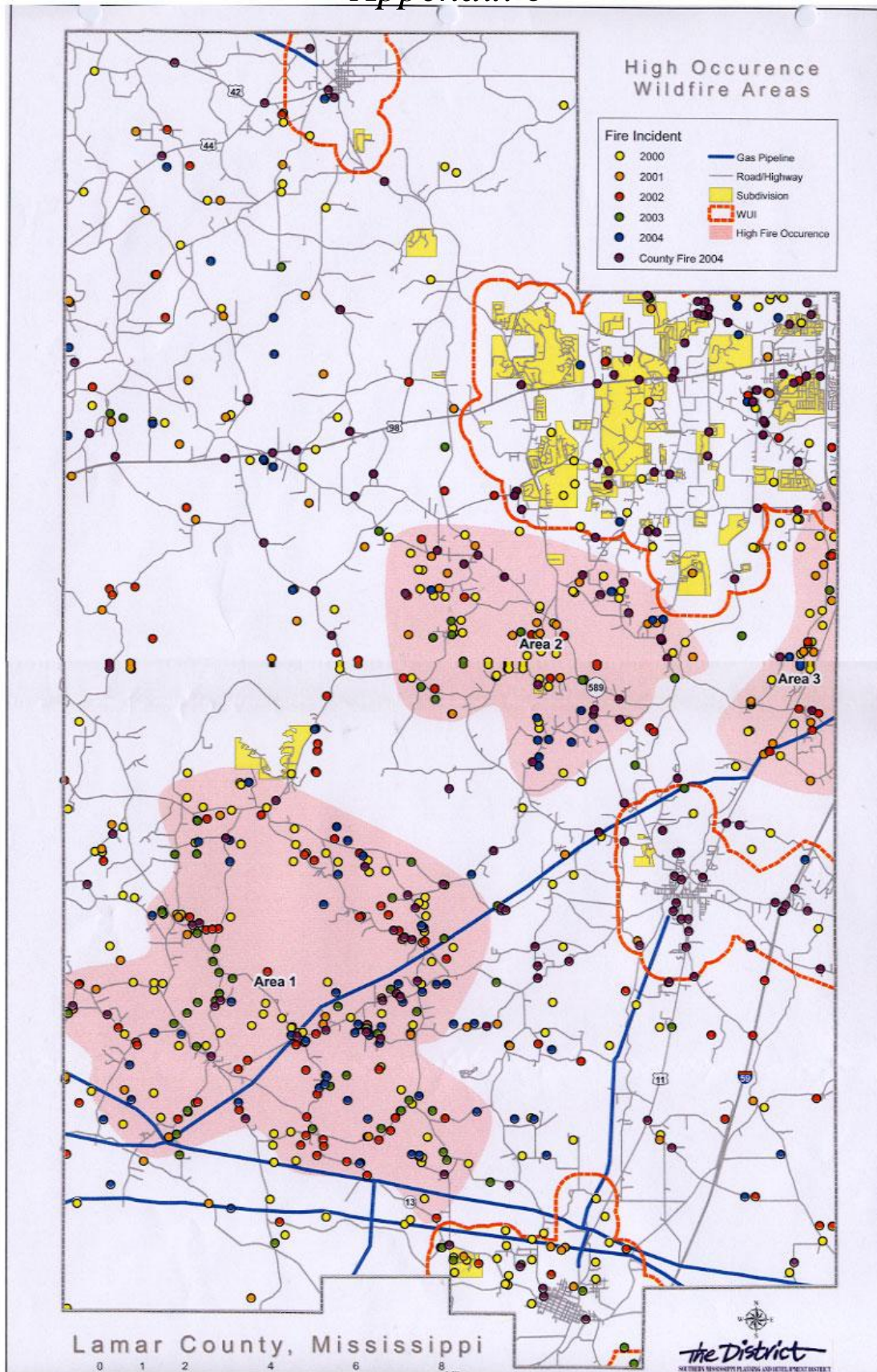
## Appendix 5

### Lamar County Dams





## Appendix 6



## *Appendix 7*

Hazard Mitigation Council invitations extended to:

1. Forrest County
2. City of Hattiesburg
3. Pearl River County
4. Wesley Medical Center
5. City of Purvis City Council, City Clerk
6. City of Lumberton City Council, City Clerk
7. Town of Sumrall City Council, City Clerk
8. Lamar County Fire Coordinator
9. Lamar County Sheriff Department
10. Lamar County Emergency Management
11. Lamar County Planning Department
12. The Walker Associates Engineering Firm
13. Hattiesburg Homebuilder's Association
14. American Red Cross
15. Mississippi Power Company
16. Pearl River Valley Electric Power Association
17. Lamar County School Superintendents (Lamar County and Lumberton)